

Appendix A

ACWD's Groundwater Management Policy

ALAMEDA COUNTY WATER DISTRICT
GROUNDWATER MANAGEMENT POLICY

**(Adopted January 26, 1989)
(Amended March 22, 2001)**

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GROUNDWATER MANAGEMENT POLICY
ADOPTED JANUARY 26, 1989
Amended March 22, 2001

BACKGROUND

The Alameda County Water District (ACWD) was created by a vote of area residents in December 1913, thereby becoming the first water district in California to be formed under the County Water District Act enacted earlier that year. It is governed by a five-member board of directors, elected at large.

In the years preceding the vote, local farmers and residents had become concerned about water companies and agencies exporting water from both Alameda Creek and local groundwater to nearby communities such as Oakland and San Francisco. The result of these exports was that the groundwater table was falling at a rapid rate. The voters hoped, in establishing ACWD, to regain control over local water supplies, to protect the underground water in the Niles Cone Groundwater Basin, and to conserve the waters of Alameda Creek.

ACWD now has several sources of supply, including water purchased from the State Water Project (via the South Bay Aqueduct) and the San Francisco Public Utilities Commission (via the Hetch Hetchy aqueduct system). But groundwater remains an important component of its supply, currently furnishing 35% of the water ACWD distributes. In dry years, groundwater has contributed over 60% of the supply. Thus, conservation and preservation of the groundwater basin continues to be a vitally important program for ACWD.

AUTHORIZATION

This Groundwater Management Policy is based on the statutory authority granted to ACWD under the County Water District Law (commencing with Section 30000 of the Water Code); the Replenishment Assessment Act of the Alameda County Water District (Section 4, Chapter 1942

of the Statutes of 1961, as amended in 1970 and 1973), which grants additional powers to ACWD to prevent pollution, contamination, or diminution in quality of the groundwater supply; local well ordinances (Fremont No. 950, as amended; Newark No. 136; and Union City No. 109-73); agreements with other agencies; and local hazardous materials ordinances.

POLICY STATEMENT

It is the policy of the Alameda County Water District to efficiently protect and manage the Niles Cone Groundwater Basin to ensure a reliable supply of high quality water that satisfies present and future municipal, industrial, recreational, and agricultural water needs in the ACWD service area. ACWD will develop and implement appropriate programs within the ACWD service area to protect and manage the groundwater basin as a long-term source of water supply for ACWD. ACWD will also actively protect the groundwater basin from activities outside the ACWD service area that may negatively impact the water quality and/or water supply of the basin.

OBJECTIVES

The purpose of this policy is to protect and improve ACWD's groundwater resources for the benefit of both ACWD's customers and private well owners by taking actions designed to meet the following objectives:

- Increase groundwater replenishment capability.
- Increase the usable storage capacity of the groundwater basin.
- Operate the basin to provide: (1) a reliable water supply to meet baseload and peak distribution system demands, (2) an emergency source of supply, and (3) reserve storage to augment dry year supplies.
- Protect groundwater quality from degradation from any and all sources including: saline

- water intrusion, wastewater discharges, recycled water use, urban and agricultural runoff, or chemical contamination.
- Improve groundwater quality by (1) removing salts and other contaminants from affected areas of the basin, and (2) improving the water quality of source water used for groundwater recharge.

The specific groundwater management programs that have been developed and implemented by ACWD to achieve these policy objectives are listed in Table 1 and are described in greater detail in Attachment 1 to this Policy.

This Policy is intended to serve as a guide to ACWD management in the continued development and implementation of programs to manage and protect ACWD water resources and as a nontechnical document to explain ACWD groundwater programs to members of the public. This Policy is not intended to create legal rights in any person or organization, or to impose legal obligations on ACWD. It may be amended or repealed by the Board of Directors at any time.

TABLE 1 - SUMMARY OF ACWD GROUNDWATER MANAGEMENT PROGRAMS

Groundwater Program	Description
Water Supply Management	Planning, managing, and optimizing ACWD's sources of supply: watershed runoff, SWP water for recharge, SWP water for treatment, SFPUC water for blending, and water banking.
Groundwater Replenishment	Operation of ACWD groundwater recharge facilities to optimize 1) capture of local runoff, 2) replacement of water extracted from production and ARP wells, and 3) maintenance of groundwater levels to prevent salt water intrusion.
Watershed Protection and Monitoring	Assisting in the protection and monitoring of the watershed to optimize the quality of runoff water available for ACWD water supply.
Basin Monitoring	Sampling and measuring wells to assess and evaluate 1) groundwater quality, 2) water pressures within the basin, and 3) the direction of groundwater flow.
Wellhead Protection Program	Identify sensitive recharge and groundwater areas, maintain an inventory of potential threats within these areas, assess the vulnerability of source water, and develop management strategies to minimize the potential for groundwater quality impacts.
Aquifer Reclamation Program	Pump brackish water from degraded aquifers in order to 1) increase useable basin storage, 2) improve overall water quality, 3) prevent movement of brackish water toward ACWD production wells, and 4) provide (future) supply augmentation through treatment to potable water standards.
Groundwater Protection Program	Maintain an active role in 1) assisting with the identification of potential groundwater contamination, 2) implementing monitoring systems at hazardous materials storage sites, and 3) providing technical oversight for investigations and cleanups at hazardous materials spill sites.
Well Ordinance Administration	As enforcing agency for municipal ordinances governing construction, repair, or destruction of wells, ACWD provides inspection services, collects fees, and performs field searches for abandoned wells which could act as a conduit for contamination of groundwater.

ATTACHMENT 1

ACWD GROUNDWATER MANAGEMENT PROGRAMS

(March 22, 2001)

Eight major groundwater management programs have been developed and implemented by ACWD to achieve the objectives identified in ACWD's Groundwater Management Policy:

- Water Supply Management
- Groundwater Replenishment
- Watershed Protection and Monitoring
- Basin Monitoring
- Wellhead Protection Program
- Aquifer Reclamation Program
- Groundwater Protection Program
- Well Ordinance Administration

Water Supply Management

ACWD has three primary sources of water: (1) runoff from the Alameda Creek Watershed, (2) treated surface water purchased from the San Francisco Public Utilities Commission (SFPUC) and delivered through the Hetch Hetchy aqueduct system, and (3) untreated surface water purchased from the State Water Project (SWP) and delivered through the South Bay Aqueduct. Alameda Creek watershed runoff and imported water from the State Water Project are used for replenishment of the Niles Cone Groundwater Basin.

The groundwater basin is used conjunctively with surface water supplies. Generally, surface water production facilities are operated throughout the year to meet distribution system demands. Groundwater production facilities are operated to meet a portion of the base load demand and to meet peak and emergency demands. A desalination facility is planned to be operational in 2002 to treat some of the brackish groundwater currently being discharged to the San Francisco Bay from the Aquifer Reclamation Program wells (see Aquifer Reclamation Program section) and produce a new source of high quality water.

ACWD conducts an annual survey of groundwater conditions to determine the amount of imported water needed to maintain groundwater levels within an acceptable range and to determine a replenishment assessment rate. Groundwater levels are also used to trigger dry year water management response programs, including additional water conservation and utilization of off-site water banking and/or exchange programs.

Owners of wells who pump water from the groundwater basin are required to pay a replenishment assessment to reimburse ACWD for a portion of the cost of imported water used to recharge the depleted groundwater basin and to help offset ACWD's groundwater basin operations and management costs. Currently, the owners or operators of 234 wells receive annual registration forms as part of the replenishment assessment program.

Reclaimed wastewater is a potential alternative source of supply for ACWD. ACWD will cooperate with the Union Sanitary District to explore appropriate and beneficial uses of reclaimed wastewater within ACWD's service area in locations where there is very little risk of percolation into the aquifers used for potable water production.

Groundwater Replenishment

ACWD utilizes sections of the Alameda Creek Flood Control Channel behind three inflatable rubber dams and recharge ponds (abandoned quarry pits) to store and percolate

water into the aquifers of the Niles Cone Groundwater Basin. The groundwater replenishment program serves two major roles:

- (1) Replenishment of groundwater extracted to meet local demands and to replace brackish water extracted as part of the Aquifer Reclamation Program.
- (2) Maintenance of groundwater flow toward San Francisco Bay, in order to prevent future saline water intrusion from the bay and to displace brackish water remaining from historic saline water intrusion.

Through ACWD's long range Capital Improvement Program, a major portion of the recharge ponds below (i.e., west of) the Hayward Fault were rehabilitated in 1997 and 1998 and resulted in greater storage capacity within the ponds and increased the rate at which water is recharged to replace water pumped from the groundwater basin.

Recharge facilities are operated to maximize the capture of local runoff. The operating criteria for the recharge facilities and the groundwater basin are continuously evaluated to optimize the use of these resources.

Watershed Protection and Monitoring

ACWD plays a major role in coordinating and communicating with other state and local agencies to influence policy decisions related to activities within the watershed of Alameda Creek which could have a negative effect on ACWD water supplies and the groundwater basin. This includes review of environmental impact reports, technical evaluation of National Pollutant Discharge Elimination System (NPDES) permits, emergency response to surface spills, participation in watershed planning and technical committees, and participation in planning studies for expansion of wastewater export facilities in the Livermore-Amador Valley.

As part of ACWD's watershed protection program, ACWD will require (to the extent

ACWD has legal authority to do so) and in all cases will request that lead agencies for future development projects within the Upper Alameda Creek Watershed that may affect water quality in Alameda Creek determine the extent and significance of those impacts, and will request such lead agencies to require adequate mitigation of any significant impacts to Alameda Creek and ACWD. Specific mitigation measures will depend on the particular features of individual projects including their location, size, volume of water applied and/or discharged, and the physical/chemical/biological composition of such water. Mitigation may include either or both implementation of on-site source control measures or contributions to off-site mitigation projects, such as reimbursement of a portion of ACWD's cost of constructing and operating a demineralization facility. The goal of whatever mitigation measures are employed is to prevent individual project or cumulative effects of development (or other projects within the Alameda Creek Watershed) from adversely changing the quality of groundwater in the Niles Cone Groundwater Basin.

ACWD is working in coordination with other agencies to implement a watershed monitoring program consisting of sampling surface water, measuring water quality parameters, and estimating water flow rates at key locations in the watershed. ACWD also patrols Alameda Creek performing visual inspections and collecting samples for water quality analysis. ACWD has constructed and maintains an automated monitoring station located adjacent to Alameda Creek at the west end of Niles Canyon which provides continuous information and signals an alarm to ACWD when there are significant changes in water flow or quality that may affect the operation of ACWD's recharge facilities.

Basin Monitoring

The District performs weekly water level measurements of representative wells in each major aquifer to monitor changes in groundwater levels. A more comprehensive

monitoring program consisting of sampling and measuring water levels is performed in the spring and fall of each year to assess the groundwater quality, water pressures within the basin, and direction of groundwater flow. Production wells are monitored regularly for a wide variety of water quality parameters specified by state and federal regulations. The groundwater recharge area is monitored daily for water level fluctuations to track percolation rates and to schedule water imports.

Because of development, many privately owned water wells that ACWD has utilized in the past for monitoring basin water levels and saline water intrusion have been destroyed. Since these wells are critical to the management of ACWD's groundwater basin, replacement monitoring wells have been included in the Capital Improvement Program. From 1997 through 1999, 32 monitoring wells have been installed as part of the Monitoring Well Construction Project. A total of approximately 60 wells are expected to be installed by 2007 to provide additional geologic information, to replace destroyed wells, and to improve water sample and water level data acquisition through efficiently located and appropriately designed wells.

Wellhead Protection Program

The 1986 Amendments to the Safe Drinking Water Act require each state to establish a Wellhead Protection Program which "protects the wellhead areas of all public water systems from contaminants that may have adverse human health effects." California is relying on local agencies to plan and implement this program. ACWD has initiated the identification of surface and recharge areas vulnerable to contamination for the protection of ACWD's groundwater facilities. The program also includes the identification of potential contaminant sources, development of management practices to reduce the contamination risk, identification of areas to be monitored, and preparation of a contingency/emergency

response plan in the event of a contamination incident. As an example of a management practice, ACWD has worked with the City of Fremont to require a "Do Not Pollute" decal at each storm drain inlet within a development adjacent to the recharge facilities and has mailed a stormwater runoff public education brochure to all houses on streets with storm drains that discharge directly into a recharge pond.

The groundwater portion of the Source Water Assessment Program (SWAP) that is now being required by the California Department of Health Services (DHS) has a similar focus to that of the Wellhead Protection Program. SWAP requires the identification of sensitive surface water and groundwater areas, an inventory of potential threats within those areas, and an assessment of source vulnerability. The primary difference between the programs is that the Wellhead Protection Program additionally identifies management strategies to minimize the potential for groundwater quality impacts. Because of the overlap between these programs, development of the programs will be closely coordinated. Since DHS is requiring a SWAP for all new sources of water, a "pilot" SWAP is currently being prepared for Aquifer Reclamation Program wells that will serve as supply wells for ACWD's future desalination facility. This pilot SWAP will serve as a model for developing a SWAP for all ACWD facilities in the future.

Both of these programs are expected to benefit from the results of the American Water Works Association Research Foundation project being jointly conducted by ACWD and the Lawrence Livermore National Laboratory. The project, titled "Predicting Water Quality Changes from Artificial Recharge Sources to Nearby Wellfields," began in the spring of 1997 and is expected to be completed in 2001. The scope of work includes the characterization and evaluation of groundwater flowing between the percolation ponds and ACWD's production wells using isotopic tracers, age-dating techniques, and production and monitoring well sampling. A major objective of the study is determining groundwater and

chemical travel times within the fastest flow paths between the recharge facilities and the production wells.

ACWD's efforts in developing a Wellhead Protection Program and maintaining a strong public education program have been recognized as a Groundwater Guardian Affiliate by the Groundwater Foundation, a private non-profit educational organization that is dedicated to educating the public about the conservation and protection of groundwater. The Groundwater Guardian Affiliate designation is awarded to entities at the regional level that work to promote shared responsibility for groundwater protection.

Aquifer Reclamation Program

The goal of this program is to remove entrapped saline water from degraded portions of aquifers in the Niles Cone Groundwater Basin in order to increase usable basin storage, to improve overall water quality, and to prevent the movement of this saline water toward production wells. Pumped water from a combination of nine Aquifer Reclamation Program (ARP) wells is discharged to flood control channels in accordance with a NPDES permit issued by the Regional Water Quality Control Board. Operation of this program depends on the annual availability of water supplies to replace the water that is pumped out of the aquifers. In the future, some of the wells used in this program will be converted to supply water to the brackish groundwater desalination facility planned for Newark to supplement ACWD's drinking water supply.

Five other wells are being evaluated as possible additions to the Aquifer Reclamation Program. These wells are former Salinity Barrier Project wells. The Salinity Barrier Project (SBP) was initiated in the late 1970's by ACWD in cooperation with the Department of Water Resources. The plan was to install 14 extraction wells strategically located to create an alignment just inland of the salt evaporator ponds, running parallel

along the entire stretch of ACWD's shoreline. Simultaneous pumping of the wells would create a trough along the alignment to prevent inland migration of saline water originating from the bay and evaporator ponds during drought periods. In addition to preventing new sea water intrusion, SBP operation was planned as a potential augmentation of the Aquifer Reclamation Program during non-drought periods for mitigating historic sea water intrusion in the interior part of the basin. By the late 1980's, five of the fourteen wells were constructed. However, the project was postponed pending further evaluation.

In the course of comprehensive water supply and facilities planning in the 1990's, ACWD determined that operation of the basin below sea level during drought periods is no longer a necessary or desirable strategy relative to other water supply options that have since become available to ACWD. Because the basin is not likely to be operated significantly below sea level during drought periods, SBP is not needed to prevent new sea water intrusion. Although ACWD's groundwater basin strategy no longer includes a salt water barrier, groundwater modeling indicates that pumping these wells may help to improve water quality in the inland portions of the groundwater basin (which is the goal of the Aquifer Reclamation Program), especially if they are pumped during wet periods with high piezometric head. More groundwater modeling work is needed to determine whether their contribution to water quality improvement would justify their activation.

Groundwater Protection Program

ACWD takes an active role in (1) assisting regulatory agencies and industry in identifying sources of potential groundwater contamination, (2) implementing monitoring systems at hazardous materials storage sites, and (3) providing technical oversight for the investigation and cleanup operations at Leaking Underground Fuel Tank (LUFT) and Spills, Leaks, Investigation, and Cleanup (SLIC) sites to assure the protection of the groundwater

basin. Coordination with federal, state, county, and city agencies similarly involved is a key to the success of this program. This program's objectives are to protect the basin from future water quality degradation by ensuring that existing tanks have not leaked and that future chemical releases are quickly identified and controlled.

Since 1988, ACWD informally provided assistance to the California Regional Water Quality Control Board - San Francisco Bay Region (Regional Board) in overseeing the investigation and remediation at LUFT and SLIC sites. In order to memorialize the terms of this participation and to further strengthen the coordination between the Regional Board and ACWD, the agencies entered into a Cooperative Agreement on June 27, 1996. ACWD entered into similar Cooperative Agreements with the Cities of Fremont, Newark, and Union City on March 25, 1997, June 26, 1997, and August 12, 1997 to further strengthen the interagency coordination and cost-effective implementation of groundwater protection within the cities. ACWD also entered into an agreement with the City of Hayward on July 27, 2000 to work cooperatively on sites which threaten or affect water quality in the portion of the City of Hayward that is within ACWD's service area (Hayward Detachment areas).

Well Ordinance Administration

Ordinances to regulate the construction, repair, reconstruction, destruction or abandonment of wells with the boundaries of the Cities of Fremont, Newark, and Union City were adopted by each city (City of Fremont Ordinance No. 950 on June 26, 1973, as amended by Ordinance No. 963 on October 16, 1973; City of Newark Ordinance No. 136 on July 12, 1973; and City of Union City Ordinance No. 109-73 on June 18, 1973). The purpose of the ordinances is:

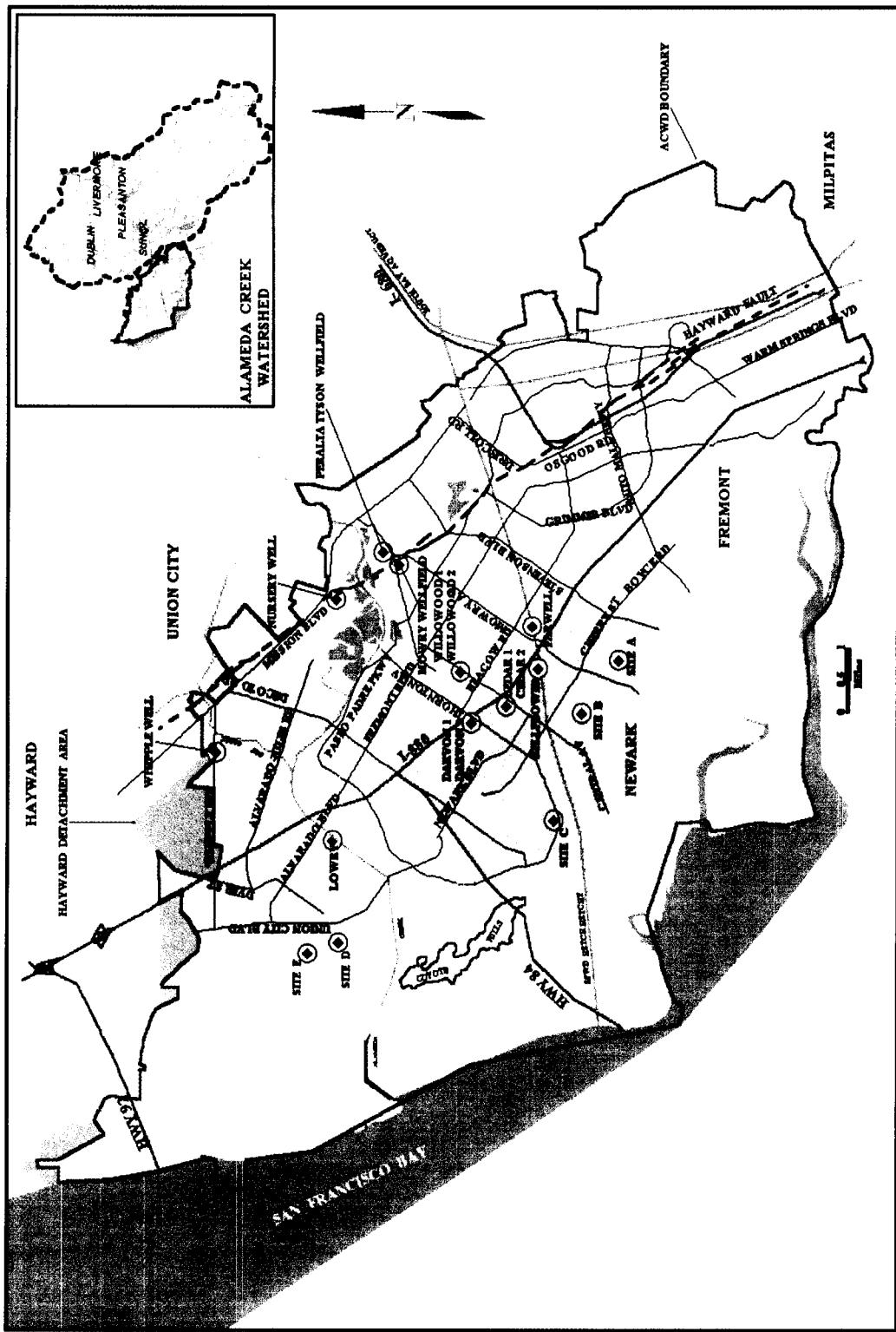
"to provide for the construction, repair, reconstruction, and destruction of wells, including cathodic protection wells and exploratory holes, to the end

that the groundwater found wholly or partially within the area of the [cities] will not be polluted or contaminated and that water obtained from water wells will be suitable for the beneficial uses intended and will not jeopardize the health, safety or welfare of the people of the said city, and for the destruction of abandoned wells or wells found to be public nuisances, including cathodic protection wells and exploratory holes, to the end that such wells will not cause pollution or contamination of groundwater or otherwise jeopardize the health, safety or welfare of the people of the said city."

Each of the ordinances designates ACWD as the enforcing agency as defined by the Department of Water Resources and requires that a written permit be obtained from ACWD prior to conducting any of the work described above in each of the cities. By separate resolutions on January 10, 1974, ACWD agreed to implement the city ordinances and authorized the collection of fees to defray the expenses of enforcing them (Resolution No. 74-002 to implement Ordinance No. 950 as amended by Ordinance No. 963 of the City of Fremont; Resolution No. 74-003 to implement Ordinance No. 136 of the City of Newark; Resolution No. 74-004 to implement Ordinance No. 109-73 of the City of Newark). ACWD has also worked with the City of Hayward to amend the City Well Ordinance to require ACWD's approval prior to the construction, operation, or destruction of wells in Hayward Detachment areas.

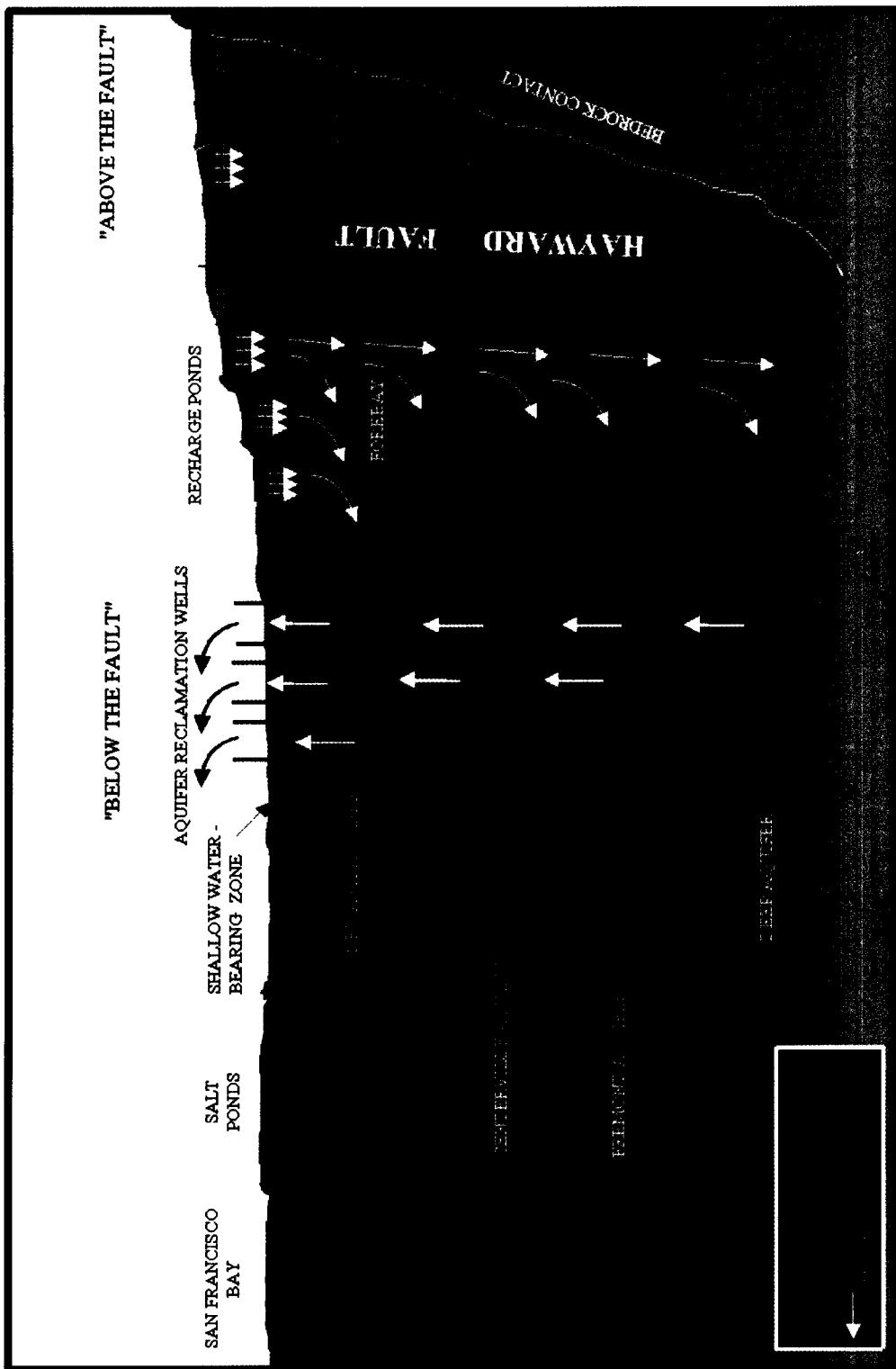
ACWD has developed a well destruction program in cooperation with the cities. When land use changes are proposed, the cities require the property owners or developers to obtain a letter from ACWD indicating whether wells are located within the boundaries of the development. This process gives ACWD the opportunity to conduct a record and field search for wells before development occurs. If wells are located within the development,

the city and appropriate parties are notified. The destruction of abandoned wells then become a condition for approval of the proposed development or land use change by the city building or planning departments. ACWD also maintains a process to insure that abandoned wells are properly destroyed before water service improvements are accepted.



ATTACHMENT 2 - ALAMEDA COUNTY WATER DISTRICT GROUNDWATER FACILITIES

ATTACHMENT 3 - NILES CONE GROUNDWATER BASIN SCHEMATIC



Appendix B

**CUWCC Best Management Practices Annual Reports:
2002-2003 & 2003-2004**

Accounts & Water Use

Reporting Unit Name:
Alameda County Water District
Year:
2003
Submitted to
CUWCC
12/01/2004

A. Service Area Population Information:1. Total service area population
323250**B. Number of Accounts and Water Deliveries (AF)**

Accounts & Water Use		
Reporting Unit Name: Alameda County Water District		
Type	Metered	Unmetered
	No. of Accounts	Water Deliveries (AF)
1. Single-Family	68623	25239
2. Multi-Family	2017	8528
3. Commercial	2348	4965
4. Industrial	715	4048
5. Institutional	446	2178
6. Dedicated Irrigation	1814	5583
7. Recycled Water	0	0
8. Other	1795	172
9. Unaccounted	NA	3672
Total	77738	54385

Metered

Reported as of 9/19/05

Unmetered

Reported as of 9/19/05

Accounts & Water Use

Reporting Unit Name:
Alameda County Water District
Year:
2004
Submitted to
CUWCC
06/27/2005

A. Service Area Population Information:1. Total service area population
323250**B. Number of Accounts and Water Deliveries (AF)**

Accounts & Water Use		
Reporting Unit Name: Alameda County Water District		
Type	Metered	Unmetered
	No. of Accounts	Water Deliveries (AF)
1. Single-Family	68805	25985
2. Multi-Family	2017	8121
3. Commercial	2314	5347
4. Industrial	716	4072
5. Institutional	447	2295
6. Dedicated Irrigation	1816	6300
7. Recycled Water	0	0
8. Other	1792	179
9. Unaccounted	NA	4158
Total	77907	56427

Metered

Reported as of 9/19/05

Unmetered

Reported as of 9/19/05

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Base Year Data		Base Year Data	
Reporting Unit:	Alameda County Water District	Submitted to CUWCC	1/01/2000
INSTRUCTIONS: This form MUST BE completed and submitted to the CUWCC prior to filing any BMP reports. The data provided on this form is used in determining coverage requirements for specific BMPs as indicated. If some of the data requested is not available, make reasonable estimates. You can update and edit values, if more precise information becomes available in the future.			
For Customer Classification Definitions (i.e. Single Family, Multi-Family) click HERE.			
<input type="checkbox"/> 1. Your BASE YEAR is 1987 . NOTE: Many calculations in determining credit history and coverage requirements are contingent on your BASE YEAR , which is calculated based on the following criteria. If a Signatory joined the MUD in 1987 or earlier, then the Base Year is 1987. If a Signatory joined the MUD after 1987, then the Base Year is the year the MUD was signed. The same holds true for LUSP Contractors, as the date their Base Year is calculated from is the date that their Plan was published in the Federal Register .			
<input type="checkbox"/> BMP 1 2. Number of single-family customers in 1997 [64671]			
3. Number of multi-family units in 1997 [33850]			
<input type="checkbox"/> BMPs 2 and 14 4. Number of single-family housing units constructed prior to 1992 [63068]			
5. Number of multi-family units prior to 1992 [32733]			
<input type="checkbox"/> BMP 4 6. Number of unmetered accounts in 1997 [0]			
<input type="checkbox"/> BMPs 5 and 9 7. Number of commercial accounts in 1997 [2245]			
8. Number of industrial accounts in 1997 [614]			
9. Number of institutional accounts in 1997 [415]			
<input type="checkbox"/> BMP 14 10. Total water use (AF) by commercial, industrial and institutional accounts in 1997 [12567]			
<input type="checkbox"/> BMP 14 11. Average number of toilets per single-family household [2]			
12. Average number of toilets per multi-family household [1.3]			
13. Five-year average resale rate of single-family households [3.5]			
14. Five-year average resale rate of multi-family households [3.5]			
15. Average persons per single-family			

Base Year Data	household	[3]
16. Average persons per multi-family/household	[3]	

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http://bmp.cuwcc.org/bmp/onetime/showform.lasso?whichform=baseyear&1533117				

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BMP Activity History: Multiple-Year Overview					

Reporting Unit:**Alameda County Water District**

INSTRUCTIONS: Exhibit 1 allows Signatories to credit BMP activity completed prior to 1988 against BMP coverage requirements. To obtain credit for this past activity you must complete the information summarized below. Choose a year and click "Go" to ADD or EDIT BMP activity data for that specific year. If you do not enter previous BMP activity, the system will have no way to calculate credit toward coverage requirements for this activity.

◆ Choose A [1991] Go

Year: Select the YEAR where you would like to enter new data or

edit existing data

A. Number of RESIDENTIAL Water Use Surveys by Year

Year	No. Single-Family Surveys	No. Multi-Family Surveys
1991	0	0
Submitted on 11/01/2000	0	0
1992	0	0
Submitted on 11/01/2000	0	0
1993	40	0
Submitted on 11/01/2000	0	0
1994	0	0
Submitted on 11/01/2000	0	0
1995	6	0
Submitted on 11/01/2000	0	0
1996	531	0
Submitted on 11/01/2000	0	0
1997	143	0
Submitted on 11/01/2000	0	0
1998	40	0
Total	760	1722

B. Number of LANDSCAPE Surveys Completed by Year

Year	Surveys Receiving Follow-up	Surveys Not Receiving Follow-up
1991	0	0
1992	0	0
1993	50	0
1994	0	0
1995	0	0
1996	0	0
1997	0	0
1998	0	0
Total	32	0
	82	0

C. Number of CII Surveys Completed by Year			
Year	Commercial Follow-up No Follow-up	Industrial Follow-up No Follow-up	Institutional Follow-up No Follow-up
1991	0	0	0
1992	0	0	0
1993	0	10	0
1994	0	0	0
1995	0	0	0
1996	0	0	0
1997	0	0	0
1998	12	0	4
Total	12	0	14

D. Estimated WATER SAVINGS (AF/Yr) from CII Programs by Year		
Year	Site Verified	Site Not Verified
1991	0	0
1992	0	0
1993	330	590
1994	330	590
1995	330	590
1996	330	590
1997	330	590
1998	330	590
Total	1860	3840

E. (Part I) Historical CII Ultra-Low-Flush Toilet Installations by CII Sector by Year							
Year	Auto	Food	Health	Hotel	Manufacturing	Membership	Multi-Use
1991	0	0	0	0	0	0	0
1992	0	0	0	0	0	0	0
1993	0	0	0	0	0	0	0
1994	0	0	0	0	0	0	0
1995	0	0	0	0	0	0	0
1996	0	0	0	0	0	0	0
1997	0	0	0	0	0	0	0
1998	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0

E. (Part II) Historical CII Ultra-Low-Flush Toilet Installations by CII Sector by Year							
Year	Office	Religious	Restaurant	Retail	School	Wholesale	Unknown
1991	0	0	0	0	0	0	0
1992	0	0	0	0	0	0	0
1993	0	0	0	0	0	0	0
1994	0	0	0	0	0	0	0
1995	0	0	0	0	0	0	0
1996	0	0	0	0	0	0	0
1997	0	0	0	0	0	0	0
1998	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0

G. Number of Residential LowFlow Showerhead Distributions / Installations by Year:		
Year	Single-Family	Multi-Family
1991	0	0
1992	0	0
1993	0	0
1994	0	0
1995	0	0
1996	0	0
1997	0	0
1998	0	0
Total	0	0

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BMP 01: Water Survey Programs for Single-Family and Multi-Family Residential Customers

Reporting Unit:
Alameda County Water District

Year:
2003BMP Form Status:
100% Complete

A. Implementation

- Based on your signed MOU date, 09/12/1991, your Agency STRATEGY DUE DATE is:
- Has your agency developed and implemented a targeting/marketing strategy for SINGLE-FAMILY residential water use surveys?

09/11/1993

yes

01/01/1993

yes

01/01/1997

yes

01/01/1997

yes

a. If YES, when was it implemented?

B. Water Survey Data**Survey Counts:**

- Number of surveys offered:
- Number of surveys completed:

Indoor Survey:

- Check for leaks, including toilets, faucets and meter checks
- Check showerhead flow rates, aerator flow rates, and offer to replace or recommend replacement, if necessary
- Check toilet flow rates and offer to install or recommend installation of displacement device or direct customer to ULFT replacement program, as necessary; replace leaking toilet flapper; as necessary

Outdoor Survey:

- Check irrigation system and timers
- Review or develop customer irrigation schedule
- Measure landscaped area (Recommended but not required for surveys)
- Measure total irrigable area (Recommended but not required for surveys)
- Which measurement method is typically used (Recommended but not required for surveys)
 - Were customers provided with information packets that included evaluation results and water savings recommendations?
 - Have the number of surveys offered and completed, survey results, and survey costs been tracked?
 - If yes, in what form are surveys tracked?
 - Describe how your agency tracks this information.

None

yes

None

C. Water Survey Program Expenditures

	This Year	Next Year
1. Budgeted Expenditures	0	0
2. Actual Expenditures	0	0

D. "At Least As Effective As"

1. Is your AGENCY implementing an "at least as effective as" variant of this BMP?
 a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as".

E. Comments

ACWD has met the Multi-Family BMP 1 requirement, and has filed an exemption for the Single-Family BMP 1 requirement. As an alternative to the residential audit program, ACWD has implemented a residential irrigation notification program which reaches all of ACWD's SFR customers. Over the past 5 years, ACWD has notified all single-family residents seasonally (three times per year) to adjust their irrigation systems. With the coming of each seasonal change in the weather, ACWD sends all single-family residents custom designed Irrigation Reminder Post Cards with instructions on how to adjust their watering schedules in the spring, fall, and winter with the incentive that customers can reduce their water bills by preventing over watering, as well as produce a healthier yard or garden. Irrigation guides are offered free of charge to all single-family residents, and customers are also directed to our website for further landscape irrigation tips. ACWD has also launched a pilot SFR High Water Use Alert letter program. Utilizing GIS data linked with our customer service data, customers water use is compared to similar like households' water use. Those higher than 3 standard deviations above the norm are issued high water use alert letters. A list of possibilities for higher than normal use are provided along with conservation tips. Customers are also directed to call in and discuss their water use practices with a conservation staff member. Consumption at these notified residences will be monitored annually to determine effectiveness of program.

Reported as of 9/19/05

BMP 01: Water Survey Programs for Single-Family and Multi-Family Residential Customers		
Reporting Unit:	BMP Form Status:	Year: 2004
Alameda County Water District	100% Complete	
A. Implementation		
1. Based on your signed MOU date, 09/12/1991, your Agency STRATEGY DUE DATE is:	09/11/1993	
2. Has your agency developed and implemented a targeting/ marketing strategy for SINGLE-FAMILY residential water use surveys?	yes	
a. If YES, when was it implemented?	01/01/1993	
3. Has your agency developed and implemented a targeting/ marketing strategy for MULTI-FAMILY residential water use surveys?	yes	
a. If YES, when was it implemented?	01/01/1997	

B. Water Survey Data

Survey Counts:	Single Family Accounts	Multi-Family Units
1. Number of surveys offered:	0	0
2. Number of surveys completed:	0	0
Indoor Survey:		
3. Check for leaks, including toilets, faucets and meter checks	no	no
4. Check showerhead flow rates, aerator flow rates, and offer to replace or recommend replacement, if necessary	no	no
5. Check toilet flow rates and offer to install or recommend installation of displacement device or direct customer to ULFT replacement program, as necessary; replace leaking toilet flapper, as necessary	no	no
Outdoor Survey:		
6. Check irrigation system and timers	no	no
7. Review or develop customer irrigation schedule	no	no
8. Measure landscaped areas (Recommended but not required for surveys)	no	no
9. Measure total irrigable area (Recommended but not required for surveys)	no	no
10. Which measurement method is typically used (Recommended but not required for surveys)	None	None
11. Were customers provided with information packets that included evaluation results and water savings recommendations?	no	no
12. Have the number of surveys offered and completed, survey results, and survey costs been tracked?	no	no

- a. If yes, in what form are surveys tracked?
 b. Describe how your agency tracks this information.

C. Water Survey Program Expenditures

	This Year	Next Year
1. Budgeted Expenditures	0	0
2. Actual Expenditures	0	

D. "At Least As Effective As"

1. Is your AGENCY implementing an "at least as effective as" variant of this BMP?
 a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as."

E. Comments

ACWD has met the Multi-Family BMP 1 requirement, and has filed an exemption for the Single-Family BMP 1 requirement. As an alternative to the residential audit program, ACWD has implemented a residential irrigation notification program which reaches all of ACWD's SFR customers. Over the past 5 years, ACWD has notified all single-family residents seasonally (three times per year) to adjust their irrigation systems. With the coming of each seasonal change in the weather, ACWD sends all single-family residents custom designed Irrigation Reminder Post Cards with instructions on how to adjust their watering schedules in the spring, fall and winter with the incentive that customers can reduce their water bills by preventing over watering, as well as produce a healthier yard or garden. Irrigation guides are offered free of charge to all single-family residents, and customers are also directed to our website for further landscape irrigation tips. ACWD has also launched a pilot SFR High Water Use Alert letter program. Utilizing GIS data linked with our customer service data, customers water use is compared to similar households' water use. Those higher than 3 standard deviations above the norm are issued high water use alert letters. A list of possibilities for higher than normal use are provided along with conservation tips. Customers are also directed to call in and discuss their water use practices with a conservation staff member. Consumption at these notified residences will be monitored annually to determine effectiveness of program.

Reported as of 9/19/05

BMP 02: Residential Plumbing Retrofit

Reporting Unit:
Alameda County Water District

BMP Form Status:
100% Complete

- A. Implementation**
1. Is there an enforceable ordinance in effect in your service area requiring replacement of high-flow showerheads and other water use fixtures with their low-flow counterparts?
 a. If YES, list local jurisdictions in your service area and codes or ordinance in each.
- no

2. Has your agency satisfied the 75% saturation requirement for single-family housing units?
 3. Estimated percent of single-family households with low-flow showerheads:

- 80%
- no
4. Has your agency satisfied the 75% saturation requirement for multi-family housing units?
 5. Estimated percent of multi-family households with low-flow showerheads:

- 73%
- no
6. If YES to 2 OR 4, above, please describe how saturation was determined, including the dates and results of any survey research.
 A saturation study was conducted in the Spring of 2000. Based on that study, saturation rates for showerheads in ACWD service area were 55% for single families and 46% for multi-families. These rates were accomplished over a 5 year period, or since plumbing standards changed flow rates for shower heads. Based on these 2000 percentages, single-family replacements rates equal 11% per year and multi-family rates equal 9% per year. ACWD feels confident in these percentages since they are substantially more conservative than the 20-30% decay rate listed in the CUWCC BMP Costs and Savings Study, July 2000. A second saturation study will be completed in the near future to determine actual saturation. However, until such time that a second study can be completed, ACWD will assume saturation does not exceed 80%.

B. Low-Flow Device Distribution Information

1. Has your agency developed a targeting/ marketing strategy for distributing low-flow devices? yes
 07/01/1996
- a. If YES, when did your agency begin implementing this strategy?

- b. Describe your targeting/ marketing strategy.

- All pre-1992 residential units are identified. 2. ACWD offers conservation kits through direct mailing (post cards), through our website (800 number to call), distribution at community events, as well as advertising through bill inserts.

Low-Flow Devices Distributed/ Installed	SF Accounts	MF Units
2. Number of low-flow showerheads distributed:	150	0
3. Number of toilet-displacement devices distributed:	75	0
4. Number of toilet flappers distributed:	0	0
5. Number of faucet aerators distributed:	225	0
6. Does your agency track the distribution and cost of low-flow devices?	yes	

a. If YES, in what format are low-flow devices tracked?

- b. If yes, describe your tracking and distribution system :

MS Access database is used to track all customers who receive kits. Data includes customer name, address, phone, account #, pre 1992 construction, if fixture is needed (i.e. if no kit ordered in past) and date distributed.

C. Low-Flow Device Distribution Expenditures

	This Year	Next Year
1. Budgeted Expenditures	0	0
2. Actual Expenditures	4500	

D. "At Least As Effective As"

1. Is your AGENCY implementing an "at least as effective as" variant of this BMP?

- a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as."

E. Comments

ACWCD provides free conservation devices to all SFR and MFR customers with fixtures installed prior to 1992. These devices are offered to the customer via ACWCD's website order form, phone order or as part of our Notice of High Water Use pilot program.

Reported as of 9/19/05

BMP 02: Residential Plumbing Retrofit

Reporting Unit: Alameda County Water District BMP Form Status: Year: 2004

A. Implementation

1. Is there an enforceable ordinance in effect in your service area requiring replacement of high-flow showerheads and other water use fixtures with their low-flow counterparts?
a. If YES, list local jurisdictions in your service area and code or ordinance in each:

2. Has your agency satisfied the 75% saturation requirement for single-family housing units?
3. Estimated percent of single-family households with low-flow showerheads:
4. Has your agency satisfied the 75% saturation requirement for multi-family housing units?
5. Estimated percent of multi-family households with low-flow showerheads:
6. If YES to 2 OR 4 above, please describe how saturation was determined, including the dates and results of any survey/research.

A saturation study was conducted in the Spring of 2000. Based on that study, saturation rates for showerheads in ACWCD service area were 55% for single families and 46% for multi-families. These rates were accomplished over a 5 year period, or since plumbing standards changed flow rates for shower heads. Based on these 2000 percentages, single-family replacements rates equal 1.1% per year and multi-family rates equal 9% per year. ACWCD feels confident in these percentages since they are substantially more conservative than the 20-30% decay rate listed in the CIWCC BMP Costs and Savings Study, July 2000. A second saturation study will be completed in the near future to determine actual saturation. However, until such time that a second study can be completed, ACWCD will assume saturation does not exceed 80%.

B. Low-Flow Device Distribution Information

1. Has your agency developed a targeting/ marketing strategy for distributing low-flow devices? Yes
a. If YES, when did your agency begin implementing this strategy?
b. Describe your targeting/ marketing strategy.

- 07/01/1996
All pre-1992 residential units are identified. 2. ACWCD offers conservation kits through direct mailing (post cards), through our website (800 number to call), distribution at community events, as well as advertising through bill inserts.

Low-Flow Devices Distributed/ Installed

	SF Accounts	MF Accounts	MF Units
2. Number of low-flow showerheads distributed:	194	0	0
3. Number of toilet-displacement devices distributed:	97	0	0
4. Number of toilet flappers distributed:	0	0	0
5. Number of faucet aerators distributed:	291	0	yes
6. Does your agency track the distribution and cost of low-flow devices?			

- a. If YES, in what format are low-flow devices tracked?

b. If yes, describe your tracking and distribution system :

MS Access database is used to track all customers who receive kits. Data includes customer name, address, phone, account # pre 1992 construction, if fixture is needed (i.e. if no kit ordered in past) and date distributed.

C. Low-Flow Device Distribution Expenditures

	This Year	Next Year
1. Budgeted Expenditures	0	5000
2. Actual Expenditures	0	

D. "At Least As Effective As"

1. Is your AGENCY implementing an "at least as effective as" variant of this BMP?

- a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as."

E. Comments

ACWD provides free conservation devices to all SFR and MFR customers with fixtures installed prior to 1992. These devices are offered to the customer via ACWD's website order form, phone order or as part of our Notice of High Water Use pilot program. Clarification for C1 and C2: ACWD purchases conservation kits in bulk. ACWD had sufficient inventory remaining to cover orders for kits in FY 03/04; there was no need to purchase additional kits. Therefore, no expenditures were required.

Reported as of 9/19/05

Database

BMP 03: System Water Audits, Leak Detection and Repair
Reporting Unit: **Alameda County Water District** BMP Form Status: **100% Complete** Year: **2003**

A. Implementation

1. Has your agency completed a pre-screening system audit for this reporting year?
2. If YES, enter the values (AF/Year) used to calculate verifiable uses as a percent of total production:

- a. Determine metered sales (AF)
b. Determine other system verifiable uses (AF)
c. Determine total supply into the system (AF)
d. Using the numbers above, if (Metered Sales + Other Verifiable Uses) / Total Supply is < 0.9 then a full-scale system audit is required.

3. Does your agency keep necessary data on file to verify the values used to calculate verifiable uses as a percent of total production?
4. Did your agency complete a full-scale audit during this report year?
5. Does your agency maintain in-house records of audit results or the completed AWWA audit worksheets for the completed audit?
6. Does your agency operate a system leak detection program?
a. If yes, describe the leak detection program:

B. Survey Data

- Survey approximately 165 miles of pipeline per year (5 year cycle)
- Total number of miles of distribution system line.
 - Number of miles of distribution system line surveyed.

C. System Audit / Leak Detection Program Expenditures

	This Year	Next Year
1. Budgeted Expenditures	37265	57000
2. Actual Expenditures	24484	

D. "At Least As Effective As"

1. Is your AGENCY implementing an "at least as effective as" variant of this BMP?
a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as."

E. Comments

Reported as of 9/19/05

BMP 03: System Water Audits, Leak Detection and Repair

Reporting Unit:

Alameda County Water District

BMP Form Status:

100% Complete**A. Implementation**

1. Has your agency completed a pre-screening system audit for this reporting year?
2. If YES, enter the values (AF/year) used to calculate verifiable use as a percent of total production:

- a. Determine metered sales (AF)
- b. Determine other system verifiable uses (AF)

- c. Determine total supply into the system (AF)
- d. Using the numbers above, if (Metered Sales + Other Verifiable Uses) / Total Supply is < 0.9 then a full-scale system audit is required.

3. Does your agency keep necessary data on file to verify the values used to calculate verifiable uses as a percent of total production?

4. Did your agency complete a full-scale audit during this report year?
5. Does your agency maintain in-house records of audit results or the completed AWWA audit worksheets for the completed audit?

6. Does your agency operate a system leak detection program?
- a. If yes, describe the leak detection program:

Survey approximately 83 miles of pipeline per year (10 year cycle)

B. Survey Data

1. Total number of miles of distribution system line.
2. Number of miles of distribution system line surveyed.

C. System Audit / Leak Detection Program Expenditures

	This Year	Next Year
1. Budgeted Expenditures	57000	84000
2. Actual Expenditures	35486	0

D. "At Least As Effective As"

1. Is your AGENCY implementing an "at least as effective as" variant of this BMP?

- a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as".

E. Comments

All accounts within the ACWD service area are metered. Therefore, the need for a retrofit program of unmetered connections does not exist.

Reported as of 9/19/05

BMP 04: Metering with Commodity Rates for all New Connections and Retrofit of Existing

BMP Form Status:

100% Complete**A. Implementation**

1. Does your agency require meters for all new connections and bill by volume-of-use?
2. Does your agency have a program for retrofitting existing unmetered connections and bill by volume-of-use?
- a. If YES, when was the plan to retrofit and bill by volume-of-use existing unmetered connections completed?

- b. Describe the program:
- All accounts within the ACWD service area are metered. Therefore, the need for a retrofit program of unmetered connections does not exist.

- c. Number of previously unmetered accounts fitted with meters during report year.
- 0

B. Feasibility Study

1. Has your agency conducted a feasibility study to assess the merits of a program to provide incentives to switch mixed-use accounts to dedicated landscape meters?
- a. If YES, when was the feasibility study conducted?

- b. Describe the feasibility study.
2. Number of CII accounts with mixed-use meters.
3. Number of CII accounts with mixed-use meters retrofitted with dedicated irrigation meters during reporting period.

C. Meter Retrofit Program Expenditures

	This Year	Next Year
1. Budgeted Expenditures	0	0
2. Actual Expenditures	0	0

D. "At Least As Effective As"

1. Is your AGENCY implementing an "at least as effective as" variant of this BMP?
- a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as".

E. Comments

All accounts within the ACWD service area are metered. Therefore, the need for a retrofit program of unmetered connections does not exist.

Reported as of 9/19/05

BMP 04: Metering with Commodity Rates for all New Connections and Retrofit of ExistingReporting Unit: **Alameda County Water District**BMP Form Status: **100% Complete****A. Implementation**

1. Does your agency require meters for all new connections and bill by volume-of-use? **yes**
2. Does your agency have a program for retrofitting existing unmetered connections and bill by volume-of-use? **no**
- a. If YES, when was the plan to retrofit and bill by volume-of-use existing unmetered connections completed?
- b. Describe the program:

All accounts within the ACWD service area are metered. Therefore, the need for a retrofit program of unmetered connections does not exist.

3. Number of previously unmetered accounts fitted with meters during report year. **0**

B. Feasibility Study

1. Has your agency conducted a feasibility study to assess the merits of a program to provide incentives to switch mixed-use accounts to dedicated landscape meters? **no**
- a. If YES, when was the feasibility study conducted? **(mm/dd/yy)**

- b. Describe the feasibility study:
2. Number of CII accounts with mixed-use meters. **3477**
3. Number of CII accounts with mixed-use meters retrofitted with dedicated irrigation meters during reporting period. **0**

C. Meter Retrofit Program Expenditures

	This Year	Next Year
1. Budgeted Expenditures	0	0
2. Actual Expenditures	0	0

D. "At Least As Effective As"

1. Is your AGENCY implementing an "at least as effective as" variant of this BMP? **No**
- a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as."

E. Comments

- All accounts within the ACWD service area are metered. Therefore, the need for a retrofit program of unmetered connections does not exist.

Reported as of 9/19/05

BMP 05: Large Landscape Conservation Programs and IncentivesReporting Unit: **Alameda County Water District**Year: **2003****A. Water Use Budgets**

1. Number of Dedicated Irrigation Meter Accounts: **812**
2. Number of Dedicated Irrigation Meter Accounts with Water Budgets: **763**
3. Budgeted Use for Irrigation Meter Accounts with Water Budgets (AF): **2755**
4. Actual Use for Irrigation Meter Accounts with Water Budgets (AF): **3429**
5. Does your agency provide water use notices to accounts with budgets each billing cycle? **yes**

B. Landscape Surveys

1. Has your agency developed a marketing / targeting strategy for landscape surveys? **yes**
- a. If YES, when did your agency begin implementing this strategy? **01/01/1999**
- b. Description of marketing / targeting strategy:

Print material describing the program is mailed to targeted top users based on annual consumption records. Personalized letters are included with the print material indicating they have been selected to participate, giving a date that staff will be on-site to measure landscaped area for budgeting purposes. Follow-up phone calls are placed to ensure customer received information. ACWD has also partnered with the Alameda County Green Business Program to provide surveys to those customers applying for Green Business Certification. ACWD is now using GIS and aerial photo interpretation to calculate landscape square-footage for large landscape customers. Field verifications are performed to ensure accuracy.

2. Number of Surveys Offered. **226**
3. Number of Surveys Completed. **229**
4. Indicate which of the following Landscape Elements are part of your survey:

a. Irrigation System Check
b. Distribution Uniformity Analysis
c. Review / Develop Irrigation Schedules
d. Measure Landscape Area
e. Measure Total Irrigable Area
f. Provide Customer Report / Information

5. Do you track survey offers and results? **yes**
6. Does your agency provide follow-up surveys for previously completed surveys? **yes**

a. If YES, describe below:
<http://bmpr.cuwcc.org/bmp/print/printbmp.lasso?BMP=05&Year=2003&ShowMissing=Yes>

Accounts that are continually over-budget are offered detailed irrigation surveys to check for inefficiencies. During these follow-up surveys all irrigation clock schedules are noted, a station-by-station walk-through is completed, and a cup test is performed to calculate average DU. A report follows each survey with findings and recommendations, as well as an estimated irrigation schedule customized for the site. During FY 02/03, <http://bmpr.cuwcc.org/bmp/print/printbmp.lasso?BMP=05&Year=2003>, 9/19/2005

Two detailed surveys were performed.

C. Other BMP Actions

1. An agency can provide mixed-use accounts with ET-based landscape budgets in lieu of a large landscape survey program.
Does your agency provide mixed-use accounts with landscape budgets?
2. Number of CII mixed-use accounts with landscape budgets. **2**
3. Do you offer landscape irrigation training? **yes**
4. Does your agency offer financial incentives to improve landscape water use efficiency? **no**

5. Do you provide landscape water use efficiency information to new customers and customers changing services?
6. If YES, describe below:

6. Do you have irrigated landscaping at your facilities?
 - a. If yes, is it water-efficient? **yes**
 - b. If yes, does it have dedicated irrigation metering? **yes**
7. Do you provide customer notices at the start of the irrigation season? **yes**
8. Do you provide customer notices at the end of the irrigation season? **yes**

9. Is your AGENCY implementing an "at least as effective as" variant of this BMP?
10. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as."

D. Landscape Conservation Program Expenditures

	This Year	Next Year
1. Budgeted Expenditures	207,000	0
2. Actual Expenditures	1250	

E. At Least As Effective As"

1. Is your AGENCY implementing an "at least as effective as" variant of this BMP?
2. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as."

F. Comments

A1 Clarification: Due to the thoroughness of ACWD's metering program, many small sites have been fitted with dedicated landscape meters. Due to the small size of these sites, they do not fit the parameters constituting large landscape for the purposes of this BMP. Therefore, all dedicated landscape accounts with >1,000 units per year of consumption are targeted for inclusion in the large landscape water budget program. The acceptable lot size for the purposes of large landscape is anything greater than 1 acre. Calculations done using the 1,000 unit per year cut-off statistically show that this breaking point covers landscapes of 2/3 acre and greater; this is more conservative than current accepted practices. A5 Clarification: Every four months, water budget reports are mailed to all participants and their landscape contractors. Included in these reports are reminders to adjust irrigation systems with the changing of seasons and weather patterns. Customers are directed to <http://bmp.cuwcc.org/bmp/printprintmp.lasso?BMP=05&Year=2003&ShowMissing=Yes>

either call a conservation staff member or visit our website for further tips on conservation and proper irrigation scheduling.

Reported as of 9/19/05

either call a conservation staff member or visit our website for further tips on conservation and proper irrigation scheduling.

Reported as of 9/19/05

BMP 05: Large Landscape Conservation Programs and Incentives

Reporting Unit: Alameda County Water District
BMP Form Status: 100% Complete
Year: 2004

A. Water Use Budgets

1. Number of Dedicated Irrigation Meter Accounts: 876
2. Number of Dedicated Irrigation Meter Accounts with Water Budgets: 771
3. Budgeted Use for Irrigation Meter Accounts with Water Budgets (AF): 3116
4. Actual Use for Irrigation Meter Accounts with Water Budgets (AF): 3273
5. Does your agency provide water use notices to accounts with budgets each billing cycle? yes

B. Landscape Surveys

1. Has your agency developed a marketing / targeting strategy for landscape surveys?

- a. If YES, when did your agency begin implementing this strategy?

b. Description of marketing / targeting strategy:

ACWD uses GIS and aerial photo interpretation to calculate landscape square-footage for large landscape customers. Field verifications are performed to ensure accuracy. ACWD has also partnered with the Alameda County Green Business Program to provide surveys to those customers applying for Green Business Certification.

2. Number of Surveys Offered: 351
3. Number of Surveys Completed: 351
4. Indicate which of the following Landscape Elements are part of your survey:

- a. Irrigation System Check
 - b. Distribution Uniformity Analysis
 - c. Review / Develop Irrigation Schedules
 - d. Measure Landscape Area
 - e. Measure Total Irrigable Area
 - f. Provide Customer Report / Information
5. Do you track survey offers and results?
 6. Does your agency provide follow-up surveys for previously completed surveys?

a. If YES, describe below:

Accounts that are continually over-budget are offered detailed irrigation surveys to check for inefficiencies. During these follow-up surveys all irrigation clock schedules are noted, a station-by-station walk through is completed, and a cup test is performed to calculate average DU. A report follows each survey with findings and recommendations, as well as an estimated irrigation schedule customized for the site. During FY 03/04, six detailed surveys were performed.

C. Other BMP 5 Actions

1. An agency can provide mixed-use accounts with ET-based landscape budgets in lieu of a large landscape survey program.

Does your agency provide mixed-use accounts with landscape budgets?

2. Number of CII mixed-use accounts with landscape budgets.
3. Do you offer landscape irrigation training?

4. Does your agency offer financial incentives to improve landscape water use efficiency?
- | Type of Financial Incentive: | Budget (Dollars/ Year) | Number Awarded to Customers | Total Amount Awarded |
|------------------------------|------------------------|-----------------------------|----------------------|
| a. Rebates | 0 | 0 | 0 |
| b. Loans | 0 | 0 | 0 |
| c. Grants | 0 | 0 | 0 |

5. Do you provide landscape water use efficiency information to new customers and customers changing services?

- a. If YES, describe below:
6. Do you have irrigated landscaping at your facilities?
- a. If yes, is it water-efficient?
- b. If yes, does it have dedicated irrigation metering?
7. Do you provide customer notices at the start of the irrigation season?
8. Do you provide customer notices at the end of the irrigation season?

D. Landscape Conservation Program Expenditures

	This Year	Next Year
1. Budgeted Expenditures	0	25000
2. Actual Expenditures	4000	

E. "At Least As Effective As"

1. Is your AGENCY implementing an "at least as effective as" variant of this BMP?
- a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as."

F. Comments

A1 Clarification: Due to the thoroughness of ACWD's metering program, many small sites have been fitted with dedicated landscape meters. Due to the small size of these sites, they do not fit the parameters constituting large landscape for the purposes of this BMP. Therefore, all dedicated landscape accounts with >1,000 units per year of consumption are largelied for inclusion in the large landscape water budget program. The acceptable lot size for the purposes of large landscape is anything greater than 1 acre. Calculations done using the 1,000 unit per year cut-off statistically show that this break point covers landscapes of 2/3 acre and greater; this is more conservative than current accepted practices. A2 Clarification: ACWD surveyed 351 accounts during FY 03/04 for the purposes of water budget reporting using GIS and aerial photo interpretation. However, not all sites that required field verifications were ground-truthed. Therefore, only eight accounts surveyed with GIS were included in the budget reports for this FY. The remaining 343 accounts will be included in the next reporting cycle. A5 Clarification: Every four months, water budget reports are mailed to all participants and their landscape contractors. Included in these reports are reminders to adjust irrigation systems with the changing of seasons and weather patterns. Customers are directed to either call a conservation staff

member or visit our website for further tips on conservation and proper irrigation scheduling.

CUWCC | Rmmt BMP U0

BMP 06: High-Efficiency Washing Machine Rebate Programs

Reported as of 9/19/05

Reporting Unit: Alameda County Water District **BMP Form Status:** Year: 2003 **100% Complete**

A. Implementation

1. Do any energy service providers or waste water utilities in your service area offer rebates for high-efficiency washers?
- a. If YES, describe the offerings and incentives as well as who the energy/waste water utility provider is.

During portions of the reporting cycle, PG&E offered financial incentives/rebates for the purchase of an Energy Star rated clothes washing machines. ACWD's waste water utility, Union Sanitary District, did not offer rebates on residential washers although they do partner with ACWD on commercial clothes washer rebates.

2. Does your agency offer rebates for high-efficiency washers? yes

3. What is the level of the rebate? 75

4. Number of rebates awarded. 1996

B. Rebate Program Expenditures

	This Year	Next Year
1. Budgeted Expenditures	180000	150000
2. Actual Expenditures	189166	

C. "At Least As Effective As"

1. Is your AGENCY implementing an "at least as effective as" variant of this BMP? no
- a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as."

D. Comments

During a portion of the reporting period (FY'02/03), a part of the rebate was supplied from a matching funds grant with DWR. This would have altered ACWD's \$75 contribution to a rebate of \$150.

Reported as of 9/19/05

BMP 06: High-Efficiency Washing Machine Rebate Programs

Reporting Unit:
Alameda County Water District

BMP Form Status:
Year: 2004

A. Implementation

1. Do any energy service providers or waste water utilities in your service area offer rebates for high-efficiency washers?

a. If YES, describe the offerings and incentives as well as who the energy/waste water utility provider is.

During portions of the reporting cycle, PG&E offered financial incentives/rebates for the purchase of an Energy Star rated clothes washing machines. ACWD's waste water utility, Union Sanitary District, did not offer rebates on residential washers although they do partner with ACWD on commercial clothes washer rebates.

2. Does your agency offer rebates for high-efficiency washers?
3. What is the level of the rebate?
4. Number of rebates awarded.

B. Rebate Program Expenditures

	This Year	Next Year
1. Budgeted Expenditures	150000	125374
2. Actual Expenditures	147002	

C. "At Least As Effective As"

1. Is your AGENCY implementing an "at least as effective as" variant of this BMP?

a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as."

D. Comments

All program funding for this past fiscal year has been generated solely by ACWD. Although DWR grant funding could have started during the fiscal year the Bay Area Regional Washer program was delayed and did not start until July 1, 2004.

Reported as of 9/19/05

BMP 07: Public Information Programs

Reporting Unit:
Alameda County Water District

BMP Form Status:
Year: 2003

A. Implementation

1. Does your agency maintain an active public information program to promote and educate customers about water conservation?

a. If YES, describe the program and how it's organized.

ACWD's public information program includes publications which are mailed to customers on a regular basis; special brochures stressing water conservation; a drought tolerant demonstration garden; attendance at special events in our service area; hosting a web-site with on-line conservation information; workshops held for both single-family residents and landscape professionals; and display ads in the local newspaper encouraging customers to use water wisely. In addition, we have developed a water conservation postcard program in which postcards containing water conservation tips are mailed to customers four times a year. We also participate in Water Awareness Month in May by submitting press releases to the local paper, placing ads in the paper, conducting special tours, and distributing water conservation materials to the schools in our area. The public information program is a budgeted program within the Water Resources Planning Department.

2. Indicate which and how many of the following activities are included in your public information program.

Public Information Program Activity

	Yes/No	Number of Events
a. Paid Advertising	yes	4
b. Public Service Announcement	no	0
c. Bill Inserts / Newsletters / Brochures	yes	8
d. Bill showing water usage in comparison to previous year's usage	yes	
e. Demonstration Gardens	yes	1
f. Special Events, Media Events	yes	5
g. Speaker's Bureau	no	0
h. Program to coordinate with other government agencies, industry and public interest groups and media	yes	

B. Conservation Information Program Expenditures

	This Year	Next Year
1. Budgeted Expenditures	157376	168893
2. Actual Expenditures	154911	

C. "At Least As Effective As"

1. Is your AGENCY implementing an "at least as effective as" variant of this BMP?

a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as."

D. Comments

1. Is your AGENCY implementing an "at least as effective as" variant of this BMP?

a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as."

E. Reports

Reported as of 9/19/05

9/19/2005

<http://b bmp.cuwcl.org/bmp/printmp.printmp.lasso?BMP=06&Year=2004>

Reported as of 9/19/05

9/19/2005

<http://b bmp.cuwcl.org/bmp/printmp.printmp.lasso?BMP=07&Year=2003>

9/19/2005

BMP 07: Public Information ProgramsReporting Unit: **Alameda County Water District****100% Complete****A. Implementation**

1. Does your agency maintain an active public information program to promote and educate customers about water conservation?

- a. If YES, describe the program and how it's organized.

ACWD's public information program includes publications which are mailed to customers on a regular basis; special brochures stressing water conservation; a drought tolerant demonstration garden; attendance at special events in our service area; hosting a web-site with on-line conservation information; workshops held for both single-family residents and landscape professionals; and display ads in the local newspaper encouraging customers to use water wisely. In addition, we have developed a water conservation postcard program in which postcards containing water conservation tips are mailed to customers four times a year. We also participate in Water Awareness Month in May by submitting press releases to the local paper, placing ads in the paper, conducting special tours, and distributing water conservation materials to the schools in our area. The public information program is a budgeted program within the Water Resources Planning Department.

2. Indicate which and how many of the following activities are included in your public information program.

Public Information Program Activity

	Year/No	Number of Events
a. Paid Advertising	yes	5
b. Public Service Announcement	no	0
c. Bill Inserts / Newsletters / Brochures	yes	9
d. Bill showing water usage in comparison to previous year's usage	yes	
e. Demonstration Gardens	yes	1
f. Special Events, Media Events	yes	5
g. Speaker's Bureau	no	0
h. Program to coordinate with other government agencies, industry and public interest groups and media	yes	

B. Conservation Information Program Expenditures

	This Year	Next Year
1. Budgeted Expenditures	168893	172641
2. Actual Expenditures	171956	

C. "At Least As Effective As"

1. Is your AGENCY implementing an "at least as effective as" variant of this BMP?

- a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as".

D. Comments

Reported as of 9/19/05

BMP 08: School Education ProgramsReporting Unit: **Alameda County Water District****100% Complete****A. Implementation**

1. Has your agency implemented a school information program to promote water conservation?
2. Please provide information on your school programs (by grade level):

Grade	Are grade-appropriate presentations students' materials distributed?	No. of class	No. of students	No. of teachers' reached workshops
Grades K-3rd	yes	218	11837	1
Grades 4th-6th	yes	163	9884	1
Grades 7th-8th	yes	11	330	1
High School	yes	18	720	1

3. Did your Agency's materials meet state education framework requirements?
4. When did your Agency begin implementing this program?

B. School Education Program Expenditures

	This Year	Next Year
1. Budgeted Expenditures	96149	102370
2. Actual Expenditures	97837	

C. "At Least As Effective As"

1. Is your AGENCY implementing an "at least as effective as" variant of this BMP?
- a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as".

D. Comments

Reported as of 9/19/05

BMP 08: School Education Programs

Reporting Unit:
Alameda County Water District
BMP Form Status:
100% Complete

A. Implementation

1. Has your agency implemented a school information program to promote water conservation? **yes**
2. Please provide information on your school programs (by grade level):

Grade	Are grade-appropriate presentations distributed?	No. of classes	No. of students	No. of teachers' materials distributed?
Grades K-3rd	yes	216	13217	0
Grades 4th-6th	yes	139	11782	0
Grades 7th-8th	yes	12	360	0
High School	yes	6	240	0

3. Did your Agency's materials meet state education framework requirements? **yes**
4. When did your Agency begin implementing this program? **10/1/1991**

B. School Education Program Expenditures

	This Year	Next Year
1. Budgeted Expenditures	102370	104314
2. Actual Expenditures	100850	

C. "At Least As Effective As"

1. Is your AGENCY implementing an "at least as effective as" variant of this BMP? **No**
- a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as".

D. Comments

Reported as of 9/19/05

BMP 09: Conservation Programs for CII Accounts

Reporting Unit:
Alameda County Water District
BMP Form Status:
100% Complete

A. Implementation

1. Has your agency identified and ranked COMMERCIAL customers according to use? **yes**
2. Has your agency identified and ranked INDUSTRIAL customers according to use? **yes**
3. Has your agency identified and ranked INSTITUTIONAL customers according to use? **yes**

Option A: CII Water Use Survey and Customer Incentives Program

4. Is your agency operating a CII water use survey and customer incentives program for the purpose of complying with BMP 9 under this option? **yes**

CII Surveys

CII Surveys	Commercial Accounts	Industrial Accounts	Institutional Accounts
a. Number of New Surveys Offered	73	0	8
b. Number of New Surveys Completed	73	0	8
c. Number of Site Follow-ups of Previous Surveys (within 1 yr)	0	0	0
d. Number of Phone Follow-ups of Previous Surveys (within 1 yr)	47	15	7
CII Survey Components			
e. Site Visit	yes	yes	yes
f. Evaluation of all water-using apparatus and processes	yes	yes	yes
g. Customer report identifying recommended efficiency measures, paybacks and agency incentives	yes	yes	yes
Agency CII Customer Incentives	Budget (\$/Year)	No. Awarded to Customers	Total \$ Amount Awarded
h. Rebates	0	0	0
i. Loans	0	0	0
j. Grants	0	0	0
k. Others	0	0	0

Option B: CII Conservation Program Targets

5. Does your agency track CII program interventions and water savings for the purpose of complying with BMP 9 under this

option?
 6. Does your agency document and maintain records on how savings were realized and the method of calculation for estimated savings?
 7. Estimated annual savings (AF/yr) from site-verified actions taken by agency since 1991.
 8. Estimated annual savings (AF/yr) from non-site-verified actions taken by agency since 1991.

B. Conservation Program Expenditures for CII Accounts

	This Year	Next Year
1. Budgeted Expenditures	11250	30000
2. Actual Expenditures	9300	

C. "At Least As Effective As"

1. Is your AGENCY implementing an "at least as effective as" variant of this BMP?
 a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as."

D. Comments

Reported as of 9/19/05

BMP 09: Conservation Programs for CII Accounts

Reporting Unit:
Alameda County Water District
 Year:
2004

A. Implementation

1. Has your agency identified and ranked COMMERCIAL customers according to use?
2. Has your agency identified and ranked INDUSTRIAL customers according to use?
3. Has your agency identified and ranked INSTITUTIONAL customers according to use?

Option A: CII Water Use Survey and Customer Incentives Program

4. Is your agency operating a CII water use survey and customer incentives program for the purpose of complying with BMP 9 under this option?

CII Surveys	Commercial Accounts	Industrial Accounts	Institutional Accounts
a. Number of New Surveys Offered	63	2	0
b. Number of New Surveys Completed	63	2	0
c. Number of Site Follow-ups of Previous Surveys (within 1 yr)	0	0	0
d. Number of Phone Follow-ups of Previous Surveys (within 1 yr)	72	25	3
e. Site Visit	yes	yes	yes
f. Evaluation of all water-using apparatus and processes	yes	yes	yes
g. Customer report identifying recommended efficiency measures, paybacks and agency incentives	yes	yes	yes

Agency CII Customer Incentives	Budget (\$/Year)	No. Awarded to Customers	Total \$ Amount Awarded
h. Rebates	0	0	0
i. Loans	0	0	0
j. Grants	0	0	0
k. Others	0	0	0

Option B: CII Conservation Program Targets

5. Does your agency track CII program interventions and water savings for the purpose of complying with BMP 9 under this

option?

6. Does your agency document and maintain records on how savings were realized and the method of calculation for estimated savings?

7. Estimated annual savings (AF/yr) from site-verified actions taken by agency since 1991.

8. Estimated annual savings (AF/yr) from non-site-verified actions taken by agency since 1991.

B. Conservation Program Expenditures for CII Accounts

	This Year	Next Year
1. Budgeted Expenditures	30000	12500
2. Actual Expenditures	27500	

C. "At Least As Effective As"

1. Is your AGENCY implementing an "at least as effective as"

a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as."

D. Comments

BMP 09a: CII ULFT Water Savings

Reporting Unit:

Alameda County Water District

Year:

2003

Yes

1. Did your agency implement a CII ULFT replacement program in the reporting year?

If No, please explain why on Line B. 10.

A. Targeting and Marketing

1. What basis does your agency use to target customers for participation in this program? Check all that apply.

- a. Describe which method you found to be the most effective overall, and which was the most effective per dollar expended.

During this reporting cycle, ACWD used its CII surveys as the method of choice for recruiting customers to participate in the program. This has proven to be the most effective method, as well as most cost effective, for encouraging participation. Personal contact seems to be a key ingredient for success in this area.

2. How does your agency advertise this program? Check all that apply.

- a. Describe which method you found to be the most effective overall, and which was the most effective per dollar expended.

No one method was more effective than another.

B. Implementation

1. Does your agency keep and maintain customer participant information? (Read the Help Information for a complete list of all the information for this BMP.)
2. Would your agency be willing to share this information if the CuWCC did a study to evaluate the program on behalf of your agency?
3. What is the total number of customer accounts participating in the program during the last year?

22

CII Subsector

CII Subsector	Number of Toilets Replaced			
	Standard	Gravity Tank	Air Assisted	Valve Wall Mount
a. Offices	39	0	0	0
b. Retail / Wholesale	0	0	0	0
c. Hotels	0	0	0	0
d. Health	0	0	0	0
e. Industrial	0	0	0	0
f. Schools: K to 12	0	0	0	0
g. Eating	0	0	0	0
h. Government	0	0	0	0
i. Churches	0	0	0	0
j. Other	0	0	0	0

5. Program design.
6. Does your agency use outside services to implement this program?
a. If yes, check all that apply.
7. Participant tracking and follow-up.
8. Based on your program experience, please rank on a scale of 1 to 5, with 1 being the least frequent cause and 5 being the most frequent cause, the following reasons why customers refused to participate in the program.
- Disruption to business
 - Inadequate payback
 - Inadequate ULFT performance
 - Lack of funding
 - American's with Disabilities Act
 - Permitting
 - Other. Please describe in B. 9.
9. Please describe general program acceptance/resistance by customers, obstacles to implementation, and other issues affecting program implementation or effectiveness.
- This program hasn't been well accepted because of lack of motivation to customer to change out toilets. The \$150 rebate doesn't offer enough incentive to a customer to disrupt their business and go through the headaches they associate with the toilet change out. It really is an example of "if it ain't broke don't fix it."
10. Please provide a general assessment of the program for this reporting year. Did your program achieve its objectives? Were your targeting and marketing approaches effective? Were program costs in line with expectations and budgeting?
- ACWCD has not found this program to be effective in reaching the number of customers it is charged in getting to change out toilets. The current marketing of the program meets ACWCD staffing constraints and allocated budget for this program. In order to make this program as effective as it could be it will mean outsourcing the program to a vendor who will market the program and do a direct install for the customer.

C. Conservation Program Expenditures for CII ULFT

1. CII ULFT Program: Annual Budget & Expenditure Data

	Budgeted Expenditure	Actual
a. Labor	0	0
b. Materials	0	0
c. Marketing & Advertising	0	0
d. Administration & Overhead	0	0
e. Outside Services	18750	6675
f. Total	18750	6675

2. CII ULFT Program: Annual Cost Sharing

[http://bmp.cuwcc.org/bmp/print/printbtmp.laso?BMP=09&Year=2003&ShowMissing=Yes](http://bmp.cuwcc.org/bmp/print/printbtmp.laso?BMP=09&Year=2003&>ShowMissing=Yes)

9/19/2005

- a. Wholesale agency contribution
b. State agency contribution
c. Federal agency contribution
d. Other contribution
e. Total
- 2925
2925

D. Comments

This CII ULFT program offers a \$150 rebate. \$75 of that amount is supplied by Union Sanitary District.

Reported as of 9/19/05

<http://bmp.cuwcc.org/bmp/print/printbtmp.laso?BMP=09&Year=2003&ShowMissing=Yes>

9/19/2005

BMP 09a: CII ULFT Water Savings

Reporting Unit: Alameda County Water District
BMP Form Status: 100% Complete
Year: 2004

1. Did your agency implement a CII ULFT replacement program in the reporting year?
 If No, please explain why on Line B. 10.

A. Targeting and Marketing

1. What basis does your agency use to target customers for participation in this program?
 Check all that apply.

a. Describe which method you found to be the most effective overall, and which was the most effective per dollar expended.

During this reporting cycle ACWD used its CII surveys as the method of choice for recruiting customers to participate in the program. This has proven to be the most effective method, as well as most cost effective, for encouraging participation. Personal contact seems to be a key ingredient for success in this area.

2. How does your agency advertise this program? Check all that apply.

a. Describe which method you found to be the most effective overall, and which was the most effective per dollar expended.

No one method was more effective than another.

B. Implementation

1. Does your agency keep and maintain customer participant information? (Read the Help information for a complete list of all the information for this BMP.)

2. Would your agency be willing to share this information if the CUWCC did a study to evaluate the program on behalf of your agency?

3. What is the total number of customer accounts participating in the program during the last year?

17

Yes

Yes

ACWD has not found this program to be effective in reaching the number of customers it is charged in getting to change out toilets. The current marketing of the program meets ACWD staffing constraints and allocated budget for this program. In order to make this program as effective as it could be it will mean outsourcing the program to a vendor who will market the program and do a direct install for the customer.

C. Conservation Program Expenditures for CII ULFT

1. CII ULFT Program Annual Budget & Expenditure Data

	Budgeted	Expenditure
1. CII ULFT Program Annual Budget & Expenditure Data		
a. Labor	0	0
b. Materials	0	0
c. Marketing & Advertising	0	0
d. Administration & Overhead	0	0
e. Outside Services	18750	29850
f. Total	18750	29850

2. CII ULFT Program Annual Cost Sharing

- a. Wholesale agency contribution 0
- b. State agency contribution 0
- c. Federal agency contribution 0
- d. Other contribution 14925
- e. Total 14925

D. Comments

This CII ULFT program offers a \$150 rebate. \$75 of that amount is supplied by Union Sanitary District.

Reported as of 9/19/05

BMP 11: Conservation Pricing

BMP Form Status: Year: 2003
Reporting Unit: Alameda County Water District **100% Complete**

A. Implementation

Rate Structure Data Volumetric Rates for Water Service by Customer Class

1. Residential

- a. Water Rate Structure Uniform
- b. Sewer Rate Structure Service Not Provided
- c. Total Revenue from Volumetric Rates \$22487156
- d. Total Revenue from Non-Volumetric Charges, Fees and other Revenue \$4103537 Sources

2. Commercial

- a. Water Rate Structure Uniform
- b. Sewer Rate Structure Service Not Provided
- c. Total Revenue from Volumetric Rates \$3260198
- d. Total Revenue from Non-Volumetric Charges, Fees and other Revenue \$308938 Sources

3. Industrial

- a. Water Rate Structure Uniform
- b. Sewer Rate Structure Service Not Provided
- c. Total Revenue from Volumetric Rates \$2964929
- d. Total Revenue from Non-Volumetric Charges, Fees and other Revenue \$164981 Sources

4. Institutional / Government

- a. Water Rate Structure Uniform
- b. Sewer Rate Structure Service Not Provided
- c. Total Revenue from Volumetric Rates \$1432219
- d. Total Revenue from Non-Volumetric Charges, Fees and other Revenue \$140319 Sources

5. Irrigation

- a. Water Rate Structure Uniform
- b. Sewer Rate Structure Service Not Provided
- c. Total Revenue from Volumetric Rates \$3583056
- d. Total Revenue from Non-Volumetric Charges, Fees and other Revenue \$266629 Sources

6. Other

- a. Water Rate Structure Uniform
- b. Sewer Rate Structure Service Not Provided
- c. Total Revenue from Volumetric Rates \$122540
- d. Total Revenue from Non-Volumetric Charges, Fees and other Revenue \$76527 Sources

B. Conservation Program Expenditures

	This Year	Next Year
1. Budgeted Expenditures	0	0
2. Actual Expenditures	0	0

C. "At Least As Effective As"

1. Is your AGENCY implementing an "at least as effective as" variant of this BMP?
No

a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as".

D. Comments

Reported as of 9/19/05

BMP 11: Conservation Pricing

	Reporting Unit:	BMP Form Status:	Year:
	Alameda County Water District	100% Complete	2004

A. Implementation Rate Structure Data Volumetric Rates for Water Service by Customer Class

Class	a. Water Rate Structure	b. Sewer Rate Structure	c. Total Revenue from Volumetric Rates	d. Total Revenue from Non-Volumetric Charges, Fees and other Revenue Sources
1. Residential	Uniform	Service Not Provided	\$24158218	\$4170504
2. Commercial	Uniform	Service Not Provided	\$3557841	\$304509
3. Industrial	Uniform	Service Not Provided	\$2793725	\$159948
4. Institutional / Government	Uniform	Service Not Provided	\$1584271	\$138465
5. Irrigation	Uniform	Service Not Provided	\$3785649	\$260989
6. Other	Uniform	Service Not Provided	\$138226	\$77219

B. Conservation Pricing Program Expenditures

	This Year	Next Year
1. Budgeted Expenditures	0	0
2. Actual Expenditures	0	

C. "At Least As Effective As"

1. Is your AGENCY implementing an "at least as effective as" variant of this BMP?
No
- a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as."

D. Comments

Reported as of 9/19/05

BMP 12: Conservation Coordinator

Reporting Unit:
Alameda County Water District

BMP Form Status:
100% Complete

Year:
2003

A. Implementation

1. Does your Agency have a conservation coordinator?
yes
no
2. Is this a full-time position?
no
3. If no, is the coordinator supplied by another agency with which you cooperate in a regional conservation program?
no
4. Partner agency's name:
5. If your agency supplies the conservation coordinator:

- a. What percent is this conservation coordinator's position?
100%

b. Coordinator's Name
Vana N. Phibbs

c. Coordinator's Title
Water Conservation Specialist

d. Coordinator's Experience and Number of Years
Marketing/Public Relations 15 years, Water Conservation 5 years

e. Date Coordinator's position was created (mm/dd/yyyy)
9/1/1988

f. Number of conservation staff, including Conservation Coordinator.
2

B. Conservation Staff Program Expenditures

	This Year	Next Year
1. Budgeted Expenditures	72088	167000
2. Actual Expenditures	167000	

C. "At Least As Effective As"

1. Is your AGENCY implementing an "at least as effective as" variant of this BMP?
no
- a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as."

D. Comments

Reported as of 9/19/05

BMP 12: Conservation Coordinator

Reporting Unit: Alameda County Water District
BMP Form Status: 100% Complete

A. Implementation

1. Does your Agency have a conservation coordinator? yes
2. Is this a full-time position? no
3. If no, is the coordinator supplied by another agency with which you cooperate in a regional conservation program? no
4. Partner agency's name: _____

5. If your agency supplies the conservation coordinator:
 - a. What percent is this conservation coordinator? 100%
 - b. Coordinator's Name Vana N. Phibbs
 - c. Coordinator's Title Water Conservation Specialist
 - d. Coordinator's Experience and Number of Years Marketing/Public Relations 15 years, Water Conservation 6 years

- e. Date Coordinator's position was created (mm/dd/yyyy) 9/1/1988
- f. Number of conservation staff, including Conservation Coordinator. 2

B. Conservation Staff Program Expenditures

	This Year	Next Year
1. Budgeted Expenditures	\$167000	\$167000
2. Actual Expenditures	\$167000	

C. "At Least As Effective As"

1. Is your AGENCY implementing an "at least as effective as" variant of this BMP?
 - a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as." no

D. Comments

Reported as of 9/19/05

BMP 13: Water Waste Prohibition

Reporting Unit: Alameda County Water District
BMP Form Status: 100% Complete

A. Requirements for Documenting BMP Implementation

1. Is a water waste prohibition ordinance in effect in your service area? yes

- a. If YES, describe the ordinance: _____

Ordinance 30 was passed by ACWID Board of Directors on March 25, 1991. This ordinance prohibits wasteful water use by all customers in the service area through restrictions on non-essential uses to maximize potable water supply. Warnings, site inspections and tiered rate structures are in place to minimize waste, with exceptions for special needs cases.

- b. Is a copy of the most current ordinance(s) on file with CUWCC?
 - a. List local jurisdictions in your service area in the first text box and water waste ordinance citations in each jurisdiction in the second text box:

City of Fremont, City of Newark, City of Union City, Union Sanitary District

none, none, none

B. Implementation

1. Indicate which of the water uses listed below are prohibited by your agency or service area.

- a. Gutter flooding
- b. Single-pass cooling systems for new connections
- c. Non-recirculating systems in all new conveyor or car wash systems
- d. Non-recirculating systems in all new commercial laundry systems
- e. Non-recirculating systems in all new decorative fountains
- f. Other, please name _____

hosing sidewalks, potable water for filling new swimming pools, restaurants serving water unless requested, using potable water to irrigate medians, water lawns in a way that results in excessive flooding or runoff

2. Describe measures that prohibit water uses listed above:

Warnings are issued to wasteful water users, with follow-up visits to ascertain if excessive use continued. Continued abuse of these restrictions could lead to the installation of a flow restrictor and/or termination of service. Cancellation of permits for hydrant water use may occur if user is in violation of the emergency regulations and restrictions in this ordinance. A tiered rate structure is in place to discourage wasteful use.

Water Softeners:

3. Indicate which of the following measures your agency has supported in developing state law:

- a. Allow the sale of more efficient, demand-initiated regenerating DLR models.
- b. Develop minimum appliance efficiency standards that:
 - i.) Increase the regeneration efficiency standard to at least 3,350 grains of hardness removed per

pound of common salt used.

- i.) Implement an identified maximum number of gallons discharged per gallon of soft water produced.
- c. Allow local agencies, including municipalities and special districts, to set more stringent standards and/or to ban on-site regeneration of water softeners if it is demonstrated and found by the agency governing board that there is an adverse effect on the reclaimed water or groundwater supply.

4. Does your agency include water softener checks in home water audit programs?

no

5. Does your agency include information about DfR and exchange-type water softeners in educational efforts to encourage replacement of less efficient timer models?

no

C. Water Waste Prohibition Program Expenditures

	This Year	Next Year
1. Budgeted Expenditures	0	0
2. Actual Expenditures	0	0

D. "At Least As Effective As"

1. Is your AGENCY implementing an "at least as effective as" variant of this BMP?

no

a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as."

E. Comments

BMP 13: Water Waste Prohibition

Reporting Unit: Alameda County Water District

A. Requirements for Documenting BMP Implementation

- Is a water waste prohibition ordinance in effect in your service area?

a. If YES, describe the ordinance:

Ordinance 30 was passed by ACWD Board of Directors on March 25, 1991. This ordinance prohibits wasteful water use by all customers in the service area through restrictions on non-essential uses to maximize potable water supply. Warnings, site inspections and tiered rate structures are in place to minimize waste, with exceptions for special needs cases.

- Is a copy of the most current ordinance(s) on file with CUWCC?

a. List local jurisdictions in your service area in the first text box and water waste ordinance citations in each jurisdiction in the second text box:

City of Fremont, City of Newark, City of Union City, Union Sanitary District

B. Implementation

- Indicate which of the water uses listed below are prohibited by your agency or service area.

- Gutter flooding
- Single-pass cooling systems for new connections
- Non-recirculating systems in all new conveyor or car wash systems
- Non-recirculating systems in all new commercial laundry systems
- Non-recirculating systems in all new decorative fountains
- Other, please name

yes

no

yes

yes

yes

yes

yes

yes

yes

yes

Warnings are issued to wasteful water users, with follow-up visits to ascertain if excessive use continued. Continued abuse of these restrictions could lead to the installation of a flow restrictor and/or termination of service. Cancellation of permits for hydrant water use may occur if user is in violation of the emergency regulations and restrictions in this ordinance. A tiered rate structure is in place to discourage wasteful use.

Water Softeners:

- Indicate which of the following measures your agency has supported in developing state law:

- Allow the sale of more efficient, demand-initiated regenerating DfR models.
- Develop minimum appliance efficiency standards that:
 - Increase the regeneration efficiency standard to at least 3,350 grains of hardness removed per

no

no

BMP 14: Residential ULFT Replacement ProgramsReporting Unit: **Alameda County Water District**BMP Form Status: **100% Complete**Year: **2003****A. Implementation**

- ii.) Implement an identified maximum number of gallons discharged per gallon of soft water produced.
- c. Allow local agencies, including municipalities and special districts, to set more stringent standards and/or to ban on-site regeneration of water softeners if it is demonstrated and found by the agency governing board that there is an adverse effect on the reclaimed water or groundwater supply.

4. Does your agency include water softener checks in home water audit programs?

5. Does your agency include information about DLR and exchange-type water softeners in educational efforts to encourage replacement of less efficient timer models?

C. Water Waste Prohibition Program Expenditures

This Year Next Year

1. Budgeted Expenditures	0	0
2. Actual Expenditures	0	0

D. "At Least As Effective As"

1. Is your AGENCY implementing an "at least as effective" variant of this BMP?
- a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as."

E. Comments

Reported as of 9/19/05

pound of common salt used.

- ii.) Implement an identified maximum number of gallons discharged per gallon of soft water produced.
- c. Allow local agencies, including municipalities and special districts, to set more stringent standards and/or to ban on-site regeneration of water softeners if it is demonstrated and found by the agency governing board that there is an adverse effect on the reclaimed water or groundwater supply.

4. Does your agency include water softener checks in home water audit programs?

5. Does your agency include information about DLR and exchange-type water softeners in educational efforts to encourage replacement of less efficient timer models?

C. "At Least As Effective As"

1. Is your AGENCY implementing an "at least as effective" variant of this BMP?
- a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as."

E. Comments

Reported as of 9/19/05

B. Residential ULFT Program Expenditures

This Year Next Year

1. Budgeted Expenditures	0	0
2. Actual Expenditures	0	0

C. "At Least As Effective As"

1. Is your AGENCY implementing an "at least as effective" variant of this BMP?
- a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as."

D. Comments

ACWD filed a cost effectiveness exemption with CUWCC for BMP 14.

Reported as of 9/19/05

BMP 14: Residential ULFT Replacement Programs

Reporting Unit:
Alameda County Water District
BMP Form Status:
100% Complete

A. Implementation

1. Does your agency have program(s) for replacing high-water-using toilets with ultra-low flush toilets?

Number of Toilets Replaced by Agency Program During Report Year

Replacement Method	SF Accounts	MF Units
2. Rebate	0	0
3. Direct Install	0	0
4. CBO Distribution	0	0
5. Other	0	0
Total	0	0

6. Describe your agency's ULFT program for single-family residences.

See Cost Effectiveness Exemption filed for this reporting period.

7. Describe your agency's ULFT program for multi-family residences.

See Cost Effectiveness Exemption filed for this reporting period.

8. Is a toilet retrofit or resale ordinance in effect for your service area?

no
9. List local jurisdictions in your service area in the left box and ordinance citations in each jurisdiction in the right box.

B. Residential ULFT Program Expenditures

	This Year	Next Year
1. Budgeted Expenditures	0	0
2. Actual Expenditures	0	

C. "At Least As Effective As"

1. Is your AGENCY implementing an "at least as effective as" variant of this BMP?

no
a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as."

D. Comments

ACWD filed a cost effectiveness exemption with CUWCC for BMP 14.

Reported as of 9/19/05

Appendix C

ACWD Water Shortage Ordinance

ORDINANCE NO. 30

AN ORDINANCE OF ALAMEDA COUNTY WATER DISTRICT
REGULATING THE NONESSENTIAL USE OF WATER, AND
PROVIDING FOR THE CONSERVATION OF THE WATER SUPPLY OF
THE DISTRICT.

BE IT ORDAINED by the Board of Directors of ALAMEDA COUNTY WATER DISTRICT as follows:

Section 1. Declaration of a Water Shortage Emergency.

This Board of Directors does hereby find and declare as follows:

(a) Pursuant to Resolution No. 91-014, duly adopted by this Board, a public hearing was held on March 25, 1991, on the matter of whether this Board of Directors should declare a water shortage emergency condition exists within the water service area of this District.

(b) Notice of said hearing was published pursuant to law in the Argus, a newspaper of general circulation, printed and published within said water service area of the District.

(c) At said hearing all persons present were given an opportunity to be heard and all persons desiring to be heard were heard.

(d) Said hearing was called, noticed and held in all respects as required by law.

(e) This Board heard and has considered each protest against the declaration and all evidence presented at said hearing.

(f) Pursuant to Resolution No. 91-016, adopted by this Board on March 25, 1991, a water shortage emergency condition exists and prevails within the water service area of this District. Said water shortage exists by reason of the fact that the ordinary demands and requirements of the water consumers in the Alameda County Water District service area cannot be met and satisfied by the water supplies now available to this District without depleting the water supply or diminishing its quality to the extent that there would be insufficient water for human consumption, sanitation and fire protection.

Section 2. Purpose and Authority.

The purpose of this ordinance is to conserve the water supply of the District for the greatest public benefit with particular regard to public health, fire protection and domestic use; to conserve water by reducing waste; and to the extent necessary by reason of drought and the existing water shortage emergency condition, to reduce water use fairly and equitably. This ordinance is adopted pursuant to Sections 350 to 358, 31026 to 31029 and 31035 of the California Water Code.

Section 3. Effect of Ordinance.

This ordinance shall take effect May 1, 1991, shall supersede and control over any other ordinance or regulation of the District in conflict herewith, and shall remain in effect until the Board of Directors declares that the water shortage emergency has ended.

Section 4. Water Use Limitations.

(a) Restrictions on Water Use.

During the water shortage emergency condition, and to preserve the water supply for the greatest public benefit with particular regard to domestic use, sanitation, and fire protection, the following uses of water have been determined to be wasteful and are hereby prohibited:

(1) Using water in an irresponsible manner for any purpose resulting in wastage.

(2) Watering lawns or any other irrigation in a manner which results in excessive flooding or runoff into streets, gutters or other waterways.

(3) Using hoses to clean sidewalks, driveways, patios, parking lots, walkways, or other hard surface areas, except when necessary for public health or safety.

(4) Use of hoses for any purpose without a positive shutoff nozzle.

(5) Flushing sewers, hydrants or washing streets, except in cases of emergency and for essential operations.

(6) Restaurants serving water to customers unless requested.

(b) Enforcement of Restrictions.

(1) The District may, after two warnings, order that special follow-up visits be made to ascertain whether wasteful use of water is continuing to occur.

(2) In the event the District determines that water waste is still occurring at a customer's premises in violation of the restrictions on water use set forth in this ordinance, installation of a flow-restrictor, or termination of service may occur. Charges for reconnection and/or removal of flow-restrictor shall be the responsibility of the customer.

(3) The District may immediately cancel a permit to use water from a hydrant when the customer is observed using water in violation of the regulations set forth in this ordinance.

(c) Water Use Guidelines.

During the water shortage emergency condition, customers are urged to adhere to the following guidelines to conserve the limited water supply available:

(1) Utilize systems which recycle water when possible.

(2) Use water for whatever purpose in a manner which minimizes waste, and repair leaks as soon as possible.

(3) Avoid draining and refilling of existing swimming pools and/or spas where possible.

(4) Use non-potable water for construction purposes unless it is not appropriate and/or not available. If reclaimed water is used, the proposed conditions of use must meet the requirements of the San Francisco Bay Regional Water Quality Control Board.

(5) **Landscape Guidelines:**

Irrigate early in the morning (before 10:00 a.m.), to minimize evaporation.

Use of Evapotranspiration Rate to determine plant water needs is encouraged. The Evapotranspiration Rate is available at (510) 659-1970, ext. 200.

Installation of new landscaping should utilize best known irrigation and horticultural practices for efficient water use.

Existing systems should be evaluated and repaired to maximize efficiency.

Use of reclaimed water for landscaping is encouraged.

Use drought tolerant plant species wherever possible for replacement and at all new landscape installations.

Section 5. Customer Conservation Rate Schedules.

(a) Single-Family Detached Dwelling Units.

Single-family detached dwelling units shall receive a base consumption allocation (BCA) of 400 gallons per day. This allocation may be increased by an additional 50 gallons per day (4 ccf units bi-monthly) for each person in the household over four. For water uses at or above this level, the following rate schedule shall apply:

<u>Billing Units</u>	<u>Approx. gpd Maximum</u>	<u>Rate \$ Per Unit</u>
0-30	400	1.008 BCA (4 persons*)
31-48	600	1.25 x base
49-64	800	1.50 x base
65-80	1000	1.75 x base
Over 80		2.00 x base

* An additional 4 units (50 gpd) is provided for each additional person over the BCA. One billing unit equals one hundred cubic feet, or approximately 748 gallons.

(b) Multi-Family Residential and Non-Residential Customers.

All ~~mass~~-metered multi-family residential accounts and all commercial, industrial and public agency accounts will receive a BCA of 90 percent of average 1990 use, with the following charges for use above the BCA:

Up to Baseline Consumption Allocation (BCA)	\$1.008/unit base
Up to 20% above BCA	1.25 x base rate
20.01 - 40% above BCA	1.50 x base rate
40.01 - 60% above BCA	1.75 x base rate
Above 60% of BCA	2.00 x base rate

(c) Landscape Irrigation Only Accounts.

Multi-family residential, commercial, industrial or public agency/institutional accounts classified for landscape irrigation-only will receive a Base Consumption Allocation that represents 80 percent of average 1990 use, with use over this level charged pursuant to the schedule in Section 5(b) above.

New accounts with significant landscape needs with no prior history will apply for a Base Consumption Allocation based on the regional evapotranspiration rate and size of project. Use over the level provided by this allocation will be charged pursuant to the schedule in Section 5 (b) above. This formula will also be applied to those customers seeking exceptions pursuant to Section 7 below who have landscape irrigation requirements exceeding one-quarter of an acre in size.

Section 6. Water Banking.

The District will utilize water banking during the drought emergency period. This will allow customers who do not use their total base allotment of water in a given billing period to supplement their water usage up to the amount banked in a subsequent billing period. All water bank balances will be zeroed out at the end of the drought emergency program.

Section 7. Exceptions.

Pursuant to the procedures set forth in Section 8, exceptions to increase the amount of water which may be used without exceeding the basic allotments may be granted upon written request, including, but not limited to the following:

(a) Verified medical requirements.

(b) Incorrect customer classification based on predominant use. Allowance will also be made to adjust a residential BCA for home businesses for which the customer has a valid business license, (e.g., a child care provider).

(c) Accounts classified as single family which provide water for livestock.

(d) Unnecessary and undue hardship to the Applicant, including, but not limited to, adverse economic impacts, such as loss of production or jobs.

(e) Emergency conditions, such as impairment of health, sanitation, fire protection or safety of the applicant or public.

Section 8. Application Procedure for Exceptions.

Consideration of written applications for exceptions regarding restrictions on water use set forth in Section 4 or Base Consumption Allocations set forth in Section 5, shall be as follows:

(a) Written applications for exceptions shall be accepted, and may be granted by the District's Drought Management Coordinator;

(b) Denials of applications may be appealed in writing to the General Manager.

Section 9. Exemption from CEQA.

The District Board of Directors finds that this ordinance is exempt from provisions of the California Environmental Quality Act of 1970 because it is immediate action necessary to prevent or mitigate an emergency, as described in Section 15269(c) of the Guidelines promulgated under said Act.

PASSED AND ADOPTED this 23rd day of April, 1992, by the following vote:

AYES: Directors Damas, Redeker, Rollisson, Strandberg and Borghi

NOES: None

ABSENT: None

/s/ FRANK BORGHI, JR.

Frank Borghi, Jr., President
Board of Directors
Alameda County Water District

ATTEST:

/s/ RUTH R. EVANS
Ruth R. Evans, District Secretary
Board of Directors
Alameda County Water District
(SEAL)

APPROVED:

/s/ GENE RHODES
Gene Rhodes, Attorney
Alameda County Water District

CERTIFICATE

I, the undersigned Secretary of ALAMEDA COUNTY WATER DISTRICT, do hereby certify that the foregoing is a full, true and correct copy of an Ordinance of the Board of Directors of ALAMEDA COUNTY WATER DISTRICT, a political subdivision, which said Ordinance was duly adopted at a meeting of said Board regularly held on April 25, 1991, as revised by the Board at their regular meetings held on September 26, 1991, January 9, 1992, and April 23, 1992, and that a copy of said Ordinance was forthwith duly entered in the minutes of said meeting of said Board, and that the same is in full force and effect.

Dated: April 29, 1996


Marvell L. Herren, District Secretary
Alameda County Water District

REFERENCES

- ASSOCIATION OF BAY AREA GOVERNMENTS, 2003. *Projections 2003; Forecasts for the San Francisco Bay Area to the Year 2030.*
- AVILA AND ASSOCIATES, 2004. *Integrated Regional Water Management Planning in the Niles Cone Groundwater Basin.*
- ALAMEDA COUNTY WATER DISTRICT, 2004. *2004 Water Demand Forecast Update.*
- ALAMEDA COUNTY WATER DISTRICT, 1995. *Integrated Resources Planning Study.*
- ALAMEDA COUNTY WATER DISTRICT, 2001. *Groundwater Management Policy.*
- ALAMEDA COUNTY WATER DISTRICT, 1999-2004. *Groundwater Survey Reports.*
- ALAMEDA COUNTY WATER DISTRICT, 2001. *Urban Water Management Plan, 2001-2005.*
- ALAMEDA COUNTY WATER DISTRICT, 1999. *Water Demand Forecast Update, draft.*
- BROWN AND CALDWELL, 1993. *Alameda County Water District Water Demand Investigation and Forecast.*
- CAMP DRESSER & MCKEE, INC. & ASSOCIATED FIRMS, 1993. *Union Sanitary District District-Wide Master Plan, Draft Report.*
- CALIFORNIA DEPARTMENT OF WATER RESOURCES, 2005. *Notice to State Water Project Contractors, dated May 25, 2005.*
- CH2M HILL, 2000. *Recycled Water Master Plan Update, Alameda County Water District/Union Sanitary District.*
- CH2M HILL, 2003. *Recycled Water Feasibility Study, Alameda County Water district/Union Sanitary District.*
- ENVIRONMENTAL SCIENCE ASSOCIATES, INC., 1994. *Union Sanitary District District-Wide Master Plan, Program Environmental Impact Report.*
- RMC, 2004. *Bay Area Integrated Regional Water Management Plan: Water Quality and Water Supply*
- RMC, 2004. *SFPUC Wholesale Water Customer Recycled Water Potential*
- SAN FRANCISCO PUBLIC UTILITIES COMMISSION, 2005. *Transmittal Letter to ACWD, June 1, 2005.*
- SAN FRANCISCO PUBLIC UTILITIES COMMISSION, 2000. *Water Supply Master Plan, A Water Resource Strategy for the SFPUC System.*
- URS, 2004. *SFPUC Wholesale Customer Water Conservation Potential.*
- URS, 2004. *SFPUC Wholesale Customer Water Demand Projections.*
- URS, 2004. *SFPUC 2030 Purchase Estimates.*
- WATER TRANSFER ASSOCIATES, 1999. *Technical Memorandum No. 3, Analysis of Most Feasible Supplemental Supply Options.*

